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B.C. SOWIT RAINLAND EDITOR JESSIE LEE VOLUME 11 NO. 8

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CONTENTS

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TECHNOLOGY SOLUTIONS FOR BUSINESS IN CANADA

FEATURES

ONLINE SECURITY

- 14 Encryption on the desktop
- 24 Canadian firms vulnerable to Net fraud
- 26 Fingerprint scanner secures your computer
- 26 Your face is your password with Visionics
- 30 How to steal company info

EMBEDDED TECHNOLOGY

- 32 Unplugged and productive: Wireless technologies at concert venues
- 38 Anywhere, anytime: Infium keeps mobile phone users connected
- 43 Wireless, networked vehicle piggybacks Internet
- 44 Wi-Lan's future is spread spectrum

- TE1 Doing business with the generation
- TE1 Strategic a storehouse of business info
- TE8 ATI a world leader in PC graphics
- TE14 Using MMR: Electronic bidding 121
- TE15 Color the only way to go with handhelds
- TE21 Bank claims videoconferencing savings
- TE22 Minimizing liability when signing a lease
- TE24 Getting the goods (and trade) from IDC
- TE30 Nortel promises Y2K compliance
- TE30 Fortune 1000 firms reluctant Net investors

DEPT. TEST LAB

- 59 Affordable 17-inch monitors
- 66 17-inch monitor chart
- 72 The higher end of 17

NEWS & REVIEWS

NEWS

- 54 Java developer hits jackpot
- 57 Windows 98 hits the shelves

GAMES

- 74 Hits and misses for Microsoft sports

PRODUCTS/COMPANIES

- 76 Windows thumps free and easy

SOFTWARE

- 79 The end is near (again)?
- 83 A CD-ROM bargain to remember

TELECOMM

- 81 No digicam in Poland's Imaging M1
- 82 StudioStar price choice for acoustic cable
- 91 ModemPro-750C NBC's silver bullet

COMING

- 84 Domain name disputes in Cyberspace
- 86 GrindJack's top 10 gaming sites
- 88 Wearing your own Web site Part XXIV
- 92 Internet Service Provider list

TELECOMM

- 89 Voiceover offers low-cost doc management

VIDEO

- 89 Stepping Stone makes Basic training easy
- 91 Censored games non-violent and colorful
- 91 Nickelodeon attracts an older crowd

TECHNICAL

- 95 A superficial look at Microsoft Web tools
- 96 Photoshop experts offer Web design tips

MAIL BAG

- 99 MS Office 98 makes its debut on the Mac

TRAINING

- 102 Organizing outlines

THE LAST BYTE

- 115 Who watches the watchmen?

DEPARTMENTS

- 6 From the Editor
- 8 Letters
- 18 What's New
- 106 User Groups
- 107 Marketplace
- 108 Classified
- 108 Calendar
- 112 Advertising Index

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- Four PCI, three ISA, and one AGP slot
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- MM Plug-in Play Scan BIOS
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- TX Pro II chip set
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- Supports Ultra DMA hard drives and ACPI
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WHAT'S NEW

Continued from page 8

the Interactive Digital Software Association (IDSA), the organizers of E3. This figure includes US\$1.1 billion in software, US\$1.5 billion in licensing and distribution of software, and US\$9.4 billion in indirect revenues including packaging and printing.

Increasingly valued console software sales,

at US\$2.1 billion in 1997, were almost double PC game sales of \$1.8 billion—32.

Intel introduces Pentium II Xeon processor

■ JAVIER CLARA, Calif.—It's a great old service in Intel's new Pentium II Xeon processor for servers who tuned in on the Internet, Intel Corp. introduced its new, high-end workstation and server processor, the Pentium II

Xeon. The 400 MHz processor completely holds a transformation into a form that designs for multiple market segments instead of its just one: the PC.

Designed for high-end users in engineering workstations and high-fidelity transaction servers, Intel hopes the Xeon will expand its audience beyond the PC industry where Pentium designs have been devoted to user designers

by prices were and sub-1000 home-oriented machines.

At the introduction, Intel officials Patrick Golegates, corporate vice president and general manager, business platform group, and John Ichniowski, corporate vice president and general manager, enterprise server group, listed machine built around the new central processing unit (CPU) as "the latest machines on the planet" and touted out some benchmark graphs to prove it.

The Xeon was larger and faster than Level 2 caches, multiprocessing capabilities and a 100 MHz system bus to deliver its high-speed performance. Systems using them can be calculate two-four or eight concurrent processors a capability that Intel says brings "unmatched" price-to-performance values to the market.

The Xeon chip is based on a 0.35 micron P6 microarchitecture core operating at 400 MHz, with 512 KB and 1 MB Level 2 cache systems that run at the same speed as the processor itself.

Discreet Logic, MGI unite the best • MONTREAL, Que. (PQ)—Canadian firm Discreet Logic and MGI Software have decided to attend close engagement before the merger necessary MGI and the firm have decided to "work together" instead of competing, while MGI does a feasibility study on adapting Discreet's high-end graphics technology in a consumer marketplace. Discreet did not even hesitantly that the Canadian deal of current conditions "could result in significant delays in the realization of previously discussed anticipated benefits and synergies" and so decided to call the whole thing off. Discreet has proposed cancelling the merger agreement.

Contact: Discreet Logic <http://www.discreet.com>
MGI <http://www.mgi.com>

Imaging introduces mini mass storage

for handheld devices • TORONTO, Ont. (PQ)—A unique storage technology for handheld devices, C3i is a 40 MB removable hard drive system. The removable C3i drive weighs 34 g (1.2 oz) and measures about 8.4 mm by 35 mm (1/32 in. by 1 1/8 in.). The removable hard drive cartridge provides a about 5.25x3.5x25 mm (0.209x1.181x1 in.) and weighs about 10 g (1/35 oz). The C3i drives are removable cartridges now developed by us with interchangeable pattern such as digital camera, handheld PCs, GPRS-style video game controllers and other digital phones.

A variety of removable hard patterned with C3i to support the one-size standard including Kodak and Hewlett-Packard. Both companies plan to release products incorporating C3i by the end of 1998. C3i is also designed for compatibility with notebook and desktop PCs, and a variety of PCs are expected to be able to support the miniature cartridge.

—JF
Contact: Imaging <http://www.imaging.com>

VideoBrush 50K for image stitching •

CANADIAN, Calif. (PQ)—Nashville Corp. has announced the first line video processing product: a Software Development Kit (SDK) for commercial PC imaging projects. The software lets users merge video panoramas about into still images covering up to 360 degrees or stitch scanned still images together for the same effect. Users also can change

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Contact: Videotek <http://www.videotek.com>

Maxtor announces new DiamondMax hard drives • Maxtor Corp. has announced the release of two DiamondMax hard drives: the DiamondMax Plus 2000 + 80 GB, 7,200 RPM, UIDE drive with average seek time of 9

ms (average two), and the DiamondMax 2400 + available in capacities up to 13.1 GB with 5,400 RPM and seek time of 9 ms. The estimated retail price for both models is \$399.

The 2400 model is targeted at high-end desktop PC use for digital video or graphics or high performance for games in action. The 2000 model is a mainstream drive, suitable for

either business or consumer desktops. Both drives are available now, and come with Maxtor's NoQuibble Service, including Mailshots, an automated tech help line and Maxtor's an automated trouble-shooter, as well as retail-based service via the Web and toll-free phone help service. ■

Contact: Maxtor Inc. 800-2 MAXTOR
<http://www.maxtor.com/>

Mitsubishi adds 17-inch monitor to Diamond line • Mitsubishi Electric Sales Canada Inc. is latest entry into the general business and desktop-publishing monitor market: a 17-inch Diamond Plus 70. This model features an advanced Diamond CRT control system with ultra-fast 23.6ms response and dot pitch and resolution resolution of 1,280x1,024 at 64 bits. ■

Letters

Continued from page 4

I then the CCA for this depreciable asset for the year would be \$480 (\$380 x 0.30 + 0.5). The only case one would protest this deduction is when the fiscal year of the business in which the asset was acquired is less than 12 months. I suspect Mr. Johnston misinterpreted Tax Bulletin 179 paragraphs 2 and 3 and 265 paragraph 1(b). As well as Income Tax Regulation 179(81) which is the foundation for this rule.

Bulletin 171 states "Because capital cost allowance is based on the length of the tax year and not on the period during the year that depreciable property may have been used to it in earning income."

The same rule for a business is its fiscal year. This should properly clarify the issue in hand. Let's offer to the home expenses CCA claim be used to create or increase a business loss.

Robert Connor

Can I blame the post office for this one?

My buddy Google asked me the other day, "Why did I send him a New Year's card via email when I was June 8, 1998?"

I had to sit and think, and yet I was a few of my friends cards at New Year's Eve and I did indeed send you to Google but it arrived six months later!

Goes to show even letters via email get lost in the mail!

Kevin Brown

On or off?

I was wondering, is leaving the computer on for 24 hours okay? I heard that nowadays most computers are better and would give to sleeping that on leaving it on 24 hours a day is not best for the computer, is this true?

I've just noticed because I want to leave mine on (well the monitor is turned off) just the CPU is on) since I'm planning on having a digital answering machine for voice and basic Stella (well)

Cliff explains. Generally, monitors should be protected with a screen saver or set to turn themselves off with power management. Some users set their hard drives to automatically spin down, again using power management (this is not always possible or recommended).

Computer components should be protected with a good surge and spike protecting and EMI/RFI-resistant power line, or with an unmanipulable power supply.

Data should be backed up

With all of these issues handled, I leave my computer on 24 hours a day and find it very convenient. Some users claim that the reduced strain on the power supply transformers, actually increases system life. Of course, if a few (well your CPU could overheat and you could be in serious trouble. Some users believe have had problems that can automatically deal with this, but

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most compact 17-inch CRT studios in the world." The Diamond Plus 70 has a recommended price of \$299 which includes a three-year parts and labor warranty. Those taking advantage of the Mitsubishi Corporate Partners Program are guaranteed a replacement for a damaged monitor within 48 hours.—JL
Contact Mitsubishi Tel: 888-425-7776

Microsoft and Intel ranked top • SAN MATEO, Calif. (ENR)—A ranking of the top 500 digital media providers by NewMedia magazine names Microsoft and Intel as the top two firms in the industry. Intel made up the report highlights connections between content providers and technology companies. The report stands out the year 18 firms to Sony, Wadsworth 303 San Jose Mercury IDE,

Intel, Packard, Case, Disney, New Corp., KTRC, Creative, Lucent, Broadband, America Online, Video Electronics Arts and Geo. The magazine is offering a US\$250 prize that it says illustrates how these key players relate to each other in their emerging digital world.

NewMedia has also set announced a contest around NewMedia's Internet 98 Awards Festival to be held in San Francisco Nov. 11-13. The festival honors the best digitally created content in more than 40 categories and

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usually shows 1,000 or more IP mail, which is not professional quality. While it takes about 20 pages roughly, the results in general are good. The deadline for entry this year is Jan. 1 for the magazine's Web site for more information on the contest.

Contact: NewMedia Info: www.newmedia.com/98

Bell Canada offers telecom data on Web • TORONTO (ENR)—Bell Canada, a unit of RLE Inc., has announced Bell Internet Voice



Information Services (Bell), an online service that will give business telephone subscribers access to information on telecommunications activities and costs 24 hours a day via the Internet.

BVTS provides access to critical reference reports including telephone call details, telephone cost allocations, call center reports, traffic studies, private branch exchange (PBX) connectivity records and corporate directory listings. Customers can select only the services they need for a monthly fee that starts at \$5 cents per line.

Bell Canada spokesman Don Houghart told NewMedia that the service is comparable to the customer having its own call detail recording group, but the customer avoids the expense of that equipment and much of the employee time and effort needed to analyze the data.

While some of the information BVTS provides would be available to customers as the monthly bills they get from Bell, he said, "it is a way of tracking, on a real-time basis, providing of course the billable usage monthly, it is readily hour-to-hour day today." Contact: Bell Canada Tel: 800-885-1000
http://bvts.bell.ca

What's New is compiled by Megan Johnson, David Tardiff and Jeff Evans



Encryption on the desktop

By Noel Lamond

Part I: Why encryption?

Standardized law and computing power have brought us to a place where encryption applications can easily and quickly secure data directly on your hard drive or travelling over the open Internet. And it is this mass adoption of the Internet as the communications channel of choice that adds the last important factor needed to spur developers into action—a potentially huge market.

It isn't surprising, then, that products based on various forms of encryption are beginning to emerge, give-away-a-retrial offers are falling by the way, and encryption-building challenges are being announced every month. Unfortunately, even the algorithms, key and cipher often induce a glazed look in the eyes of the average computer user, making cryptography an area they don't often investigate.

However, with increased use of the computer and the Net you might want to make sure that just got and get a feel for the water. The sea of the future is jumping in, so-called and tied not about encryption basics, most developments in the politics of encryption and, a look at some of the programs available today.

Why encryption is hot today

Encrypting written words is nothing new in this century: encryption played a high profile when the Allied Forces deciphered German codes during Second World War, and really took off in the '70s when more powerful computers combined with mathematical research to produce new forms of encryption. Banks and governments have been improving their information security with various forms of encryption ever since.

Today, the number crushing ability of computers acts as practically every desk. One of the programs reviewed later in this article has a minimum hardware requirement of a 386x PC, and yet the developer is so confident that its encryption is secure it is offering a \$100,000-million reward to anyone that can break it.

Equally important to the mass use of encryption is the widespread adoption of Windows. A common desktop environment eases some of the past problems associated with communicating between different operating systems and programs.

Neither the state use of PCs or a common platform would have mattered, however, if it weren't for the fact that the Internet arrived

out of nowhere, connecting the world in a matter of a few years, and becoming an essential tool to many people.

While the security of information travelling the Net is a global concern, it has particularly been the business and financial communities that have pushed software to keep data secure. Now that we are all using the Net as an extension of our desktops, the lines between data on a hard disk and data on a server are blurring and encryption is becoming important.

How secure do you want it?

One of the problems with acquiring your data is that what was sufficiently difficult to decrypt a few years ago can now be easy. And, of course, what no cryptanalyst today may not be secure in the future.

It wouldn't be easy to crack even a relatively weak encrypted message using your home PC. Using it, it would take you or me one year of full time processing to crack 56-bit encryption. And to crack a 128-bit encryption algorithm, you'd need a special tool called a Field Programmable Gate Array. Even then, a single computer would take 38 years to try all possible key combinations.

That sounds like pretty good security except that a company using multiple computers could bring that 38 years down to 13 hours, and a government agency such as CSIS (Canadian Security Intelligence Service, also known as Canada's spy agency), could do it in less than one minute!

Our 34-bit encryption system known as Data Encryption Standard (DES) has been put forth as secure by the American government and proven to be less than that. Last year a group called DIECHALL showed that the DES encryption strategy could be broken.

The group checked nearly 16 quadrillion keys by dividing together tens of thousands of military computers over a 14-day period. How likely is it that this much strength could be brought to crack your email? Not likely, but the point is, passwords are very rapidly becoming more powerful. A 34-bit encryption system might suffice for today but what about tomorrow? And do we need an encryption standard that can be depended on at all?

Once the province of big business and government, encryption is poised to become a mass phenomenon

Crack the code challenge

Encryption companies have begun offering rewards to individuals or groups that can crack their encoded messages. Challenges by such companies are a great way to get attention. However, if the encrypted information is critical the company offering the reward has to pay up. Challenge prizes in the past two years have ranged from \$1,000 to \$10,000, but most challenges have been outdated due to changes in the encoded message. The most ambitious challenge to date is currently being offered by Javel Technologies Inc. The Calgary-based company is offering a prize of US\$1 million to anyone who can crack its encryption code!

It's not likely that anyone will collect \$1,000,000 from Javel because we are at a point where we can encode information so that it is truly unbreakable—and this is the problem governments around the world, in particular, the American government, are afraid that the worldwide Internet combined with uncrackable data opens danger.

National security?

Countries such as France, Iran, Iraq, Russia and China have laws that prohibit or regulate the use of cryptography. For example, in the United Kingdom and Germany it is illegal to transmit encrypted data by radio communication. In some countries, the use of cryptography is restricted completely. In France it is illegal to encrypt data at all.

And so various proposals have been concocted to make strong encryption illegal. At this, very moment you can send the Net and key encryption programs, some of which can only be sold and sent to American and Canadian addresses, and others that can only be sold and shipped in the United States. However, the question arises whether any country in the world could extend and/or contain encryption technology. Some companies have been very imaginative, getting around export laws, going as far as to print a whole book containing nothing but machine language (books are not subject to the U.S. strong-encryption, software embargo).

Perhaps the futility of trying to contain strong encryption is winning out. Because,

secret actions by the American government such as granting permission to Netscape (All Microsoft to use 128-bit encryption for business-level financial software) and other policy may be counteracting technology.

Although there are indications the Canadian federal government will support an international encryption industry, it is still waiting the wind. "Other countries are also seriously evaluating their encryption policy options, Industry Canada is therefore maintaining the evolving directions of Canada's major trading partners to ensure its industry and economic interests are not disadvantaged and to discourage unnecessary obstacles to global trade and commerce." This sounds like a continuation of the current situation.

At the time there are no laws in Canada regarding the export of strong encryption. But there is a voluntary agreement put forward by the U.S. and signed by Canada and others. Our signature indicates we will abide by the U.S. export embargo on strong encryption for another year or so. At that time we may or may not support whatever comes out of Washington.

Other trends indicate the U.S. is likely to ease many of these restrictions anyway. The proliferation of software and hardware products that utilize various forms of strong encryption would be difficult to impose on the marketplace.

Part II: Encryption products

Here is a look at some of the products available today to secure your data for the average computer user.

Norton Secret Eyes Only

From Symantec: Corvus Ltd.
800 One Main Rd. 500-E Port Carleton
Toronto, ON M3C 1T5
Tel: 800-385-8848
Tel: 416-461-4300
http://www.symantec.ca
Reviewed: print page 348 85

Norton Secret Eyes Only (SEYO) for Windows 95/NT is available in English or French. The program uses the RSA (Rivest, Shamir and Adleman, the authors of its invention) public key encryption engine to secure files, folders and email messages.

Public key encryption was developed in

Continued on page 22

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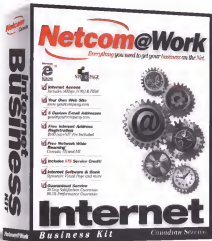
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Extrema 367D
Intel Pentium III 333MHz MMX
32MB Memory
3.5GB Hard Drive
30x C.D. ROM
15.1" TFT Display
Integrated 38Kbps Fax modem
Built-in Sound System
Universal Serial Bus Port



\$1995



Model	CPU	RAM	HDD	CD Display	Price
367D	333MHz	32MB	3.5GB	24X 12.1" DSTN	\$1,995
367T	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
368C	333MHz	32MB	3.5GB	24X 12.1" DSTN	\$1,790
368D	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,290
369C	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369D	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369E	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369F	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369G	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369H	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369I	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369J	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369K	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369L	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369M	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369N	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369O	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369P	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369Q	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369R	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369S	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369T	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369U	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369V	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369W	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369X	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369Y	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369Z	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490

PCMCIA / PC Cards

Model	CPU	RAM	HDD	CD Display	Price
367D	333MHz	32MB	3.5GB	24X 12.1" DSTN	\$1,995
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368D	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,290
369C	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
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369R	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369S	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369T	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369U	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369V	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369W	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369X	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369Y	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369Z	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490

Carrying Cases

Model	CPU	RAM	HDD	CD Display	Price
367D	333MHz	32MB	3.5GB	24X 12.1" DSTN	\$1,995
367T	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
368C	333MHz	32MB	3.5GB	24X 12.1" DSTN	\$1,790
368D	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,290
369C	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369D	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369E	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369F	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369G	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
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369I	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
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369L	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
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369N	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369O	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
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369R	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369S	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369T	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369U	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
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369Y	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
369Z	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490



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3921	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3922	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3923	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3924	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3925	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3926	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3927	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3928	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3929	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3930	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3931	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3932	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3933	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3934	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3935	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3936	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3937	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3938	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3939	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3940	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3941	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3942	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3943	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3944	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3945	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3946	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3947	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3948	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3949	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295
3950	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,295

PHILIPS PHILIPS

Model	CPU	RAM	HDD	CD Display	Price
3950	333MHz	32MB	3.5GB	24X 12.1" DSTN	\$1,995
3951	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3952	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3953	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3954	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3955	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3956	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3957	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3958	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3959	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3960	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3961	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3962	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3963	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3964	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3965	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3966	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3967	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3968	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3969	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3970	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3971	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3972	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3973	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3974	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3975	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3976	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3977	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3978	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3979	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490
3980	333MHz	32MB	3.5GB	24X 12.1" TFT	\$2,490

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10x30 VHS/DVD Video
15.1" TFT Active
800MHz Screen Box
KMPlex Fax Modem
DVD-ROM 3D sound capability, 3.1
Mbps 2 Hardware



TECRA 550CDT

386MHz Intel Pentium III
32MB RAM exp. to 128MB
1.5GB Hard Drive
10x30 VHS/DVD Video
15.1" TFT Active
800MHz Screen Box
KMPlex Fax Modem
DVD-ROM 3D sound capability, 3.1
Mbps 2 Hardware



Satellite 7490CDT

386MHz Intel Pentium III
32MB RAM exp. to 128MB
1.5GB Hard Drive
10x30 VHS/DVD Video
15.1" TFT Active
800MHz Screen Box
KMPlex Fax Modem
DVD-ROM 3D sound capability, 3.1
Mbps 2 Hardware



Satellite 310CDS

386MHz Intel Pentium III
32MB RAM exp. to 128MB
1.5GB Hard Drive
10x30 VHS/DVD Video
15.1" TFT Active
800MHz Screen Box
KMPlex Fax Modem
DVD-ROM 3D sound capability, 3.1
Mbps 2 Hardware



Satellite 310CDS

386MHz Intel Pentium III
32MB RAM exp. to 128MB
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Studio Station

- Area PLOT: Pentium II 50MHz
- 4MB RAM
- 14MB Floppy Drive
- Integrated Modem Port & USB Host Drive
- 28.8Kbps 56Kbps modem (max 3.3MB/sec)
- 28.8Kbps Modem Port & USB Host Drive
- 17" SVGA Monitor
- 100MB Hard Disk
- 100MB Hard Disk
- 100MB Hard Disk

\$1,955 PII-266MHz

\$2,095 PII-333MHz

\$2,290 PII-333MHz

Studio Station Pro

- Area PLOT: Pentium II 50MHz
- 4MB RAM
- 14MB Floppy Drive
- Integrated Modem Port & USB Host Drive
- 28.8Kbps 56Kbps modem (max 3.3MB/sec)
- 28.8Kbps Modem Port & USB Host Drive
- 17" SVGA Monitor
- 100MB Hard Disk
- 100MB Hard Disk
- 100MB Hard Disk

\$3,615 PII-333MHz

\$3,905 PII-333MHz

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5. 28.8Kbps 56Kbps modem (max 3.3MB/sec)
6. 28.8Kbps Modem Port & USB Host Drive
7. 17" SVGA Monitor
8. 100MB Hard Disk

• On Board Adapter: 1000 Dual Channel 1000, Wide 1000 Controller

• PCI-6000 Large 1000 Video Card 2MB

• 28.8Kbps 56Kbps modem (max 3.3MB/sec)

• 17" SVGA Monitor

• 100MB Hard Disk

• 100MB Hard Disk

• 100MB Hard Disk

• 100MB Hard Disk

• 100MB Hard Disk

• 100MB Hard Disk

• 100MB Hard Disk

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• 100MB Hard Disk



Windows 2000	Professional Edition	PII-266MHz	\$114.00
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Windows 2000	Professional Edition	PII-500MHz	\$114.00
Windows 2000	Professional Edition	PII-600MHz	\$114.00



Windows 2000	Professional Edition	PII-266MHz	\$114.00
Windows 2000	Professional Edition	PII-333MHz	\$114.00
Windows 2000	Professional Edition	PII-400MHz	\$114.00
Windows 2000	Professional Edition	PII-500MHz	\$114.00
Windows 2000	Professional Edition	PII-600MHz	\$114.00



Windows 2000	Professional Edition	PII-266MHz	\$114.00
Windows 2000	Professional Edition	PII-333MHz	\$114.00
Windows 2000	Professional Edition	PII-400MHz	\$114.00
Windows 2000	Professional Edition	PII-500MHz	\$114.00
Windows 2000	Professional Edition	PII-600MHz	\$114.00

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OPTIQUEST. A Monitor Company



COMPAQ



Model	CPU	RAM	Controller	CDS	Ethernet	Price
15"	PII-266MHz	32MB	SCSI-3	16x	10/100TX	\$1,295
15"	PII-333MHz	32MB	SCSI-3	16x	10/100TX	\$1,395
15"	PII-400MHz	32MB	SCSI-3	16x	10/100TX	\$1,495
15"	PII-500MHz	32MB	SCSI-3	16x	10/100TX	\$1,595
15"	PII-600MHz	32MB	SCSI-3	16x	10/100TX	\$1,695
17"	PII-266MHz	32MB	SCSI-3	16x	10/100TX	\$1,795
17"	PII-333MHz	32MB	SCSI-3	16x	10/100TX	\$1,895
17"	PII-400MHz	32MB	SCSI-3	16x	10/100TX	\$1,995
17"	PII-500MHz	32MB	SCSI-3	16x	10/100TX	\$2,095
17"	PII-600MHz	32MB	SCSI-3	16x	10/100TX	\$2,195
19"	PII-266MHz	32MB	SCSI-3	16x	10/100TX	\$2,295
19"	PII-333MHz	32MB	SCSI-3	16x	10/100TX	\$2,395
19"	PII-400MHz	32MB	SCSI-3	16x	10/100TX	\$2,495
19"	PII-500MHz	32MB	SCSI-3	16x	10/100TX	\$2,595
19"	PII-600MHz	32MB	SCSI-3	16x	10/100TX	\$2,695

Model	CPU	RAM	Controller	CDS	Ethernet	Price
15"	PII-266MHz	32MB	SCSI-3	16x	10/100TX	\$1,295
15"	PII-333MHz	32MB	SCSI-3	16x	10/100TX	\$1,395
15"	PII-400MHz	32MB	SCSI-3	16x	10/100TX	\$1,495
15"	PII-500MHz	32MB	SCSI-3	16x	10/100TX	\$1,595
15"	PII-600MHz	32MB	SCSI-3	16x	10/100TX	\$1,695
17"	PII-266MHz	32MB	SCSI-3	16x	10/100TX	\$1,795
17"	PII-333MHz	32MB	SCSI-3	16x	10/100TX	\$1,895
17"	PII-400MHz	32MB	SCSI-3	16x	10/100TX	\$1,995
17"	PII-500MHz	32MB	SCSI-3	16x	10/100TX	\$2,095
17"	PII-600MHz	32MB	SCSI-3	16x	10/100TX	\$2,195
19"	PII-266MHz	32MB	SCSI-3	16x	10/100TX	\$2,295
19"	PII-333MHz	32MB	SCSI-3	16x	10/100TX	\$2,395
19"	PII-400MHz	32MB	SCSI-3	16x	10/100TX	\$2,495
19"	PII-500MHz	32MB	SCSI-3	16x	10/100TX	\$2,595
19"	PII-600MHz	32MB	SCSI-3	16x	10/100TX	\$2,695

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Canadian firms vulnerable to Net fraud

By Martin Stone

TORONTO (ENR)—A survey conducted by one of the world's largest security firms has disclosed that despite concerns among business leaders that the Internet is not a secure way to send information, it is still widely used by Canadian companies to do just that.

According to security and investigation firm KPMG's 7th annual Canadian Fraud Survey Report, which polls the chief executives of Canada's top 1,000 companies on fraud and corporate security, only 11 percent of respondents believe that the Internet is a secure way to send information.

However, the study shows 43 percent view the company's use of the Internet to transmit sensitive or private information as risky.

"I think where the worry comes in is a more companies seem to be electronic-based money they send is more concerned about the security of their Internet transactions," KPMG's investigation and security firm president Martin Isakovic said.

"The Internet is a very easy and convenient way to conduct business and send information. People are busy and electronic commerce and mail appeals to them because it's fast and saves time," Isakovic continued. "However, this Internet presents risks to fraud if companies do not implement adequate information security measures. The Internet is electronic commerce provides opportunity for fraud in all industries."

For the first time in its seven-year history, KPMG's fraud survey asked about the security measures to companies and the transmission of information by Canadian legal companies. Isakovic points to warning signs from the results that indicate that Canadian businesses are vulnerable to fraud through the Internet.

"I believe that business leaders are putting their companies at risk," he said. "Eighty-two percent of respondents consider their company is exposed to be a potential security risk for fraud. But less than half reported using security measures which transmitting information over the phone or Internet."

Isakovic said that many companies don't realize that when you are hooked up to the Internet, the Internet is hooked up to you. "It's a two-way street," he said, "and you need adequate firewall protection."

Many companies don't realize that when you are hooked up to the Internet, the Internet is hooked up to you

—Nathan Isakovic, KPMG

Another of the survey's main findings is that 57 percent of all respondents claimed that their firm had been a victim of fraud.

Also, 47 percent of respondents believe that fraud will increase in 1998. The number rose to 62 percent within the financial services sector. When asked for a reason why fraud would increase over half of the survey participants blamed regulatory deficiencies.

However, less than five percent attributed the problem to a lack of government intervention. "One of the conclusions that I think we can draw from these results is that many business leaders believe the Internet is fraud as the lack of self-regulation in their industries," Isakovic concluded. "They don't want government regulation but they recognize the need to take responsibility for fraud prevention."

While legal regulations may be more

sophisticated, the source appears to be the same as disclosed by KPMG's survey in past years. Overwhelmingly, the greatest single source of fraud according to respondents is their company's own employees. Seventy-seven percent of respondents cited this employee as the principal source of fraud. Customers were cited next by respondents to be the second highest source.

The most common types of fraud perpetrated by employees included inflated expense accounts, theft, secret commissions, and po-

sting of company supplies. Customer-related fraud is predominantly categorized through check kiting, credit card skimming, automatic biller malware fraud, malware accounts, and misdirected cash receipts.

The survey shows that fraud has gained impact and where the level of concern is the highest are utilities, food and packaged goods, and financial services. The survey shows:

The study also spotted respondents on their vulnerability to money laundering. Only 14 percent of survey participants stated they had been impacted by this illegal activity. However, almost half the firms admitted they accept money in payment that may have been vulnerable to money laundering.

However, 83 percent of respondents acknowledged they do not conduct background checks on interviewees. Vulnerability to

money laundering was highest in the financial services sector. Fifty-eight percent of respondents from this sector believe their company is affected by occasional money laundering, while 44 percent accept financial payment that make them vulnerable to money laundering.

Companies are, however, taking measures to prevent fraud among employees.

The survey reveals 96 percent of respondents claim it is important to screen new employees, while 80 percent actually have pre-employment screening procedures already in place. However, only 50 percent of respondents say they use background checks on employees and executives. Forty-seven percent have 30 percent or greater background checks on new hires in their firms.

Other survey findings support the fact that companies should have procedures in place to prevent fraud. Some respondents report that fraud was discovered by the company through internal investigations such as internal audits and "white-blower's."

Isakovic said that adequate firewall protection is available and that "there is some sort of test, encryption software." However, he said that many companies have not taken a hard enough look at their security arrangements and are thus vulnerable.

He suggested companies conduct a "risk analysis" what this means is where they stand, where they are vulnerable to and build their security network around the findings.

The KPMG survey polled chief executives of Canada's top 1,000 public and private companies as ranked by the Financial Post newspaper. The response rate was 23 percent.

Contact: KPMG via www.kpmg.ca

By Jacqueline Boudry

WILMINGTON, Mass. (ENR)—Network "cracking" is taking a more sophisticated direction while adding variety and risk. "Cracking" and "cracking" in the process, according to a member of the new anti-cracking unit at Cambridge Technology Partners (CTP).

"Cracker" describes an individual who breaks into networks according to Wyle Wade of CTP's Enterprise Security Systems Group, at the CTP-sponsored New Black Box conference. "Hacker" refers to anyone who writes program code, runs an email virus, writes Microsoft Word macros, Wade said.

Emerging derivatives of "cracker" include "fucker," a person who breaks into phone networks and "crypter," a specialist in cracking cryptographic algorithms, Wade added. The newest cracker emerged in the past few years, "hackerware" cracker, such as the

device to help build better products, according to Wade. The hackerware was the product of those who cracked networks to "tweak" the best exchange of information.

Emerging derivatives of "cracker" include "fucker," a person who breaks into phone networks, and "crypter," a specialist in cracking cryptographic algorithms

Later on some groups like the TLD, which broke into networks "just for profit," and finally, people whose motives are strictly malicious.

Many of the newer level of cracker are led by one or a series of crackers, not Wade, nor at right members of the CTP anti-cracking team.

CTP's systems integration and software development specialists, based in Cambridge, Mass., founded the new group known as "Core," in response to customers' requests. CTP

is a "partnering" group with its customers, meeting whatever information technology requirements need to be addressed. Wade said.

With Internet security a rising concern among customers, the Core group says about how you stand in the industry is keeping on top of new security threats, according to CTP.

The job is challenging, because new "hackerware" or security holes show up every day, Wade said.

A lot of the more popular methods of cracking discussed at the conference listed on the CTP site include password cracking, network sniffing, and denial of service attacks, packet sniffing, and denial of service attacks, which result in "denial of service."

In an FTP-based attack, crackers send scripts that allow them to gain access to their Internet FTP server. Password cracking involves sniffing, or listening, on network cables or inside of a host box, such as a router, to a program. Many tactics can be used to bring denial of service, including SYN flooding, denial of service, and service loops. The reason for this type of attack may also occur on a server, but Wade said, instead of a busy, or down for repair.

Contact: Cambridge Technology Partners
www.ctp.com

Know your enemy

Frackers and crypters join crackers in creating online mischief



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Fingerprint scanner secures your computer

The BioMouse, by American Biometric Company, is a Windows 3.1, 95, or NT product that allows you or to use your fingerprint to authorize access to your computer. The product works on your PC by connecting to your parallel port (there is a patch though for you printers). While we reviewed the product on a home computer, the distinctive fingerprint scanner is intended primarily for use in government and business environments.

BioMouse

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Suggested retail price: \$269

When the computer is turned on, the BioMouse software allows the operating system to load and brings up a screen showing what the scanner sees. Placing the correct digit on the screen allows the program to capture your fingerprint, which is then analyzed and compared against enrolled prints. (You may authorize as many users as you like by enrolling them in the program.) A successful match brings Access Allowed, at which time the system control is returned to the user.

Enrollment is a simple process of placing a selected digit on the scanner and allowing the program to take three images. This is necessary because the program is analyzing a number of points over the image to create a unique algorithm that must be accurate enough to be secure yet flexible enough to allow for slight differences between scans.

In fact, you can set the level of

file acceptance. Security Level 1 has a False Acceptance Rate (FAR) of one in 10,000. Level 2 has one in 100,000, while Level 3 has one in 1,000,000. The difference between the first two levels is insignificant to the user. However, the difference between Levels 2 and 3 is noticeable because scans take longer both for enrollment and authorization.

Although the BioMouse will work under Windows 3.1 and 95, these operating systems are not truly secure, and the BioMouse could be circumvented with some work. For example, it when it is installed on an NT machine. In this situation, BioMouse works with NT's inherent security to create a truly stable and secure environment. This is obviously the intended market for the device.

A BioMetric spokesperson told The Computer Paper that the BioMouse will eventually be Windows 98 compatible, but not until control work has been completed on NT 3.5 compatibility. Considering that the expected release date of NT 3.5 is December 1998 at the earliest, it is clear the company is focusing on the NT architecture. The Windows 98 problem, when it arises, will also be passed down to other home users.

One of the only downsides in the BioMouse is that the red light emanating from the fingerprint scanning window is always on. There is no switch to turn it off and it does not automatically turn off—even when the machine is shut down. You have to unplug the AC adapter to turn it off. To be fair, American Biometric's program, the life expectancy of the light is greater than the life expectancy of the computer. This is a small point, especially in light of the fact that the company will have released BioMouse Plus by the time you read this.

BioMouse Plus (with an estimated price of

US\$499) has an auto power-off feature but, more importantly, a Smart Card reader as well. That last thought may be for what purpose?

The advantages of your fingerprint combined with the sophistication of the Smart Card which can hold 100 times more data than a magnetic stripe card means very effective security. This combination of technologies creates an individual authentication system that is highly portable, difficult to duplicate and applicable to many situations.

American Biometric has formed an alliance with Entrust Technologies, a company that works with public key encryption security. This alliance means passwords that are currently used in public key systems would be replaced by algorithms based on the user's fingerprint. The resulting system would allow desktop and laptop users to send encrypted, authenticated email and attachments without losing their password. □



BioMouse Plus

Your face is your password with Visionics system

RIDGE CITY, MD (PAP)—Visionics says its FaceIT PC software system is now available for regular and home PC users for a variety of uses, including protecting their data files from snoops, granting visitors such as visitors to leave a message, watching the monitoring eye for intruders or keeping an eye on the kids and dog.

FaceIT PC is based on the FaceIT DB biometric security system for high power corporate users.

A Visionics spokesperson says FaceIT DB "requires your image as you walk through an office building, department store or airport. It immediately links your image up to a database that reports back to local security if you are wanted for a crime, or are a missing person."

Newsday notes the Windows version may be overwhelmed in such crowded offices by the ability to keep tabs on suspected terrorists and others who threaten personal safety. Some have also accused such systems as a way for corporations to keep track of who spends too much time in the break room.

The Visionics spokesperson said the new PC version, like Windows 95, does not leave their computers without users' consent, but automatically locks the system with a screen lock and only unlocks when the authorized user comes back later again. "Ideally, there is no need to log any system since the program automatically recognizes a user."

FaceIT PC also records all persons who come into an area, whether they were there for business or not. The program can then forward the images to a remote system, if told to do so. This is a sure-thing check of what is happening at an office or at home.

A much more gripping, left out a

machine can invite visitors to leave a text message along with the facial image for authorized users to retrieve later, or send to a remote location.

FaceIT's encryption software protects accidental loss. That user facial identity to unlock the encryption program. The spokesperson said the PC version of the program is based on the U.S. data encryption standard, or DES.

FaceIT PC requires a 90 MHz or faster Pentium-based system with Microsoft Windows 95, a CD-ROM drive, a Microsoft Video for Windows-compat video capture system with SVideo240 resolution and 15-bit RGB (not pixel) pixel capture-to-memory of four frames per second. The dongle and software system is fully integrated into Windows 95 Explorer the first load.

FaceIT PC sells for US\$149.95. A 15-day free trial is available.

Contact Visionics <http://www.visionics.com>



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Unplugged and productive

By Geoff Milnebright

For anyone who has ever spent significant time away from the office that needed to be able to connect to either the corporate email system or files on the network itself, it's clear that the challenge often lies in getting one bit of wire to connect to another.

It's not always easy and it can often be a colossal waste of time, rendering wireless mobile advantage you company may have prepared when it equipped you with all these high-tech goodies. There is another way of trying to connect, however, and it's one that corporations are increasingly looking at as a solution for the remote employee.

The answer lies in getting rid of the wires altogether and providing totally wireless access to corporate networks and email. Wireless solutions allow "remote" and essentially working employees to bypass entire independent or individual telephone lines, staying in touch even in areas where they can't easily get to a conventional land line.

Wireless data solutions are in heavy demand. In fact, a recent survey by European IT services group CMC and International Data Corporation revealed that 38 percent of the 300 respondents in the United Kingdom, the Netherlands and Germany are already using mobile phones to send and receive email. In addition, 32 percent were using their mobile phones for Internet access and a full 79 percent expected to be using mobile systems to do their email work by the year 2000.

High expectations

There appear to be a couple of factors driving these expectations. The first is simply that the corporate email system—and the corporate network, which includes—has become so vital to the operation of such a vast number of businesses that few employees can tolerate its spending time out of the office without access to their vital tools.

Failing to respond to email is not necessarily grounds for dismissal, but it certainly does help your career. And saying "I'm out of the office" is often no longer an acceptable excuse for being in touch with the relevant nature of a company.

The second factor is that notebook computers, handheld computers and wireless data systems designed with features in terms of ease of use, performance, reliability and speed. Recent developments in all these areas would tend to suggest that this is not an unreasonable expectation.

Finally, there is the hope that sometime, somewhere, there will be the good news to be able to combine all of the things that people really want when they're away from the office into a single device. You shouldn't have to carry an army of laptop-powered gadgets just to be able to stay in touch while you're out of the office.

The Internet factor

And it appears that this is not just life-or-death—speculation on the part of those who sell wireless data systems. There does appear to be a demand for these services. According

Wireless technologies aid remote workers



You shouldn't have to carry an army of battery-powered gadgets just to be able to stay in touch while you are out of the office

to a recent report by industry research organization The Yankee Group, one-third of the current U.S. workforce (about 43 million people) spends 30 percent of their time away from their primary workplace.

The report suggests that more companies are pushing their workers out into the field and abolishing desk office space driven by demand to stay competitive. It suggests that these mobile workers need easy access to huge reservoirs of legacy enterprise data in addition to simple messaging capabilities.

The Internet concludes the report, is also a huge factor in this demand for wireless data services. "The Internet's advantages in terms of ultimate simplicity and standardization make it ideal as the data equivalent of the PSTN [public switched telephone network] for voice," says Yankee Group director of Wireless Mobile Communications, Robert Vignati. "As the Internet becomes increasingly compelling to the enterprise, its capabilities also extend out to the remote and mobile element of the enterprise."

It is still the only day, however, in terms of access across to the Internet and corporate network being provided to a wireless laptop. The Yankee Group suggests that although 81 percent of the top 300 U.S. companies are developing Internet applications, only 76 percent of surveyed companies have provided remote Internet/Intranet access via wireless to their mobile workers as of yet.

"The preponderance of attempts will ultimately efforts to incorporate wireless laptops into integrated business practices," predicts the report. "However, among corporations today the focus is more on using Internet to customer remote computing locations than providing mobile access. While field support managers can readily justify the technology, inte-

gration technology is less motivated to accommodate remote access requirements, especially via wireless networks."

According to the Yankee Group survey one provided high cost, and conflicting priorities as the most important reasons for not providing wireless services. Wireless also apparently accounts radio-end management and security concerns.

The report also suggests that the Internet is both a blessing and a curse for wireless. On one hand, it says the Web is causing, in specific terms, in terms of information delivery that cannot be met by wireless data networking. Most wireless data networks cannot yet provide the smooth bandwidth needed for Web or Internet page browsing (except, perhaps, for single text pages) in a way that is cost effective.

At the same time, the report concludes that the Internet also offers the means to drastically reduce the cost and complexity of wireless data integration. By finding a way to bring together the two technologies, it suggests that it may be possible to "break the logjam that has often stifled mobile data in the form of underdeveloped networks, low coverage and lack of applications."

Over the next six years, it further predicts that corporations will increasingly view wireless-critical information on Internet and most corporate email systems will be accessed mostly over the Internet.

The Yankee Group estimates that 33 percent of large U.S. corporations will be paired with field service and sales personnel with wireless Internet access by the year 2000. It also forecasts a potential 21.3 million users by 2002, resulting primarily from availability of packaged Internet access solutions, attractive flat rate service pricing for unlimited use,

wireless network speeds equivalent to ISDN in slower residential adoption of Internet-based email, higher rates, access personal Internet content, and new broadly distributed Internet incorporating voice recognition and text-to-speech technologies.

The server solution

Another server option to consider is a system that will allow you to provide a wireless "gateway" to your corporate email system. A number of companies provide such services including Vantage-based Intuitive Wireless Messaging Inc. and the "Mobility" division of the Verano group of personal telephone providers. These services have made it easier to connect the latest breed of Windows CE-based handheld computers to email among other services.

While these services differ in a number of important technical dimensions, the one experience is similar. All offer a wireless data communications system that relies on sending and receiving data using radio technology. It requires that you have a radio-based link into and out of your corporate email system and provides server and client solutions for Linux or mail, Microsoft Exchange and Microsoft Outlook. In any case, the Canada/AT&T Canada Mobility wireless data network, Bell Canada Mobility offers a service based on the Audio wireless system while BC Tel Mobility and several other provincial Mobility organizations are using a CDMA-based network that focuses part of the digital cellular phone bandwidth for data use. "Wireless mobile, handheld PCs is a natural fit" and "effective data transfer" says Vignati in the June '98 issue of TCP available online at <http://www.b2i.ca> for more information.

There are Windows CE 1.0 clients and a recently released Windows 2.0 client. Once you have the server tools to the radio network established, the basis of the system is quite simple.

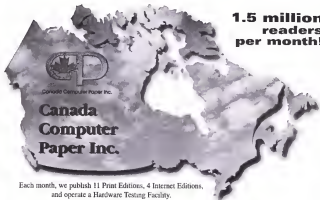
On your laptop or Windows CE 1.0 hand-held, you simply attach a wireless radio PC data card, which can then be used to access the radio data network from many radio cables in North America and elsewhere for sending and receiving mail.

The system has several advantages over using an iPC digital phone-based email server system. The major advantage is that the mail enters in "background" and when not in network, it is simply downloaded on your next corporate return in your selected, or handheld computer. Similarly outgoing mail is downloaded from the mobile computer to the radio network in the company's area and out to its destination. The only disadvantage of these systems is that they do not currently offer any form of Internet Web access.

If you need wireless Web browsing, you'll still need to look at a solution that gives you the phone line to connect to a solution of Internet service provider (ISP), but for the position that needs to provide reliable, effective and broad-based access to corporate email for mobile employees, wireless email access is a great solution that should be given serious consideration. □

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ATI brings you the latest in

Wireless networked vehicle piques interest

By Geoff Whelanlight

In the future, you can say good-bye to such terms as the Internet as you drive. Penetration of "network car" designs currently making the rounds of major automotive shows are starting to be taken seriously by the world's biggest automobile manufacturers. These possibilities include everything from global positioning systems (GPS) for navigation, on-board satellite mapping, cellular for Internet and high-resolution television capabilities, as well as non-commercial capabilities to control of these systems.

In the recent SAE International Congress and Exposition in Detroit, leading lights of the computer industry seemed to be as interested in the "real world" as



highways of the planet as they are in the "networked super highway." A joint development effort by Delphi Automotive Systems, IBM, and Microsystems and Intel, for example, resulted in something called the Network Vehicle.

The Network Vehicle, which was first shown at the 1997 Intel Computer Technology Fair in Las Vegas, seems to be gaining support. It now includes thousands of hardware and software technology along with wireless communications, global positioning via satellite, head-up displays, voice recognition, built-in three-dimensional technology, entertainment, video/audio and communications, and other features (see next feature).

What makes this effort particularly amongst auto makers is the participation of Delphi Automotive Systems, which already supplies dashboard units to a huge number of these (largely foreign) in Delphi Delco Electronics Group. The company has local offices in Delphi, Chrysler, Daimler, Fiat, Ford, General Motors, Harley-Davidson, Honda, Hyundai, Isuzu, Nissan, Mercedes-Benz, Mitsubishi, Renault, Rover, Vaux, Volvo, Toyota, and Volkswagen.

According to Dave Holbrook, general director of engineering for Delphi Delco Electronics Systems, there's potentially broad demand for the kind of car's networked vehicle will have tremendous appeal to drivers and passengers, offering a vast array of new features and functions. "It says, 'Much of the technology is to do this, including our head-up displays, steering wheel-mounted controls, and many features interface to the passenger compartment, which is really working with vehicle manufacturers. These technologies could be integrated into all types of vehicles'."

The concept vehicle receives direct broadcast reception from Hughes DirecTV and DirecPC satellites by use of an innovative flat antenna embedded in the roof of the vehicle. The Network Vehicle development team promises that this will provide direct and continuous web everything from stock analysis information to Internet and real-time stock quotes.

It also suggests the existing services that

could be integrated in the future include real-time Internet for navigation and the ability to collect emergency services in addition to GPS technology can provide the vehicle's exact location. Additional future features include downloading and electronic distribution of email or shared services, setting road alerts and live information with hand-held computers such as the IBM Notebook version of the Network Vehicle. Palm Pilot, having to do with driving a response to users and viewing video.

Delphi Delco Electronics Systems has not limited its participation in this area to Intel and Intel. In the USA, it has also in Detroit, the company worked with Intel and Microsoft to create something called the Personal Productivity Vehicle.

It's a custom version of the 1999款 and includes a huge number of components and computer hardware based on Microsoft's Windows CE 2.0-based Auto PC platform. Designed at Delphi Delco Electronics Systems, Intel's subsidiary in Cambridge, Sweden, the Personal Productivity Vehicle is custom Microsoft's Auto PC software platform with integrated MMIO services, CD-ROM (ATA) (internal controller), and port interface (external serial bus USB) COM-PORT (LAN) expansion slot, and a Diskette drive.

The computer says that all these items provide steering wheel controls, Internet speech technology to respond to driver commands, and speech input to communicate with information that allows drivers to "keep their hands on the wheel and eyes on the road." As with the Network Vehicle, speech recognition can be used to allow the driver to send email, obtain turn-by-turn GPS-based navigation to a specific destination, ask for traffic and weather conditions, locate a restaurant to eat, or change the musical selection on the stereo.

There's as well as to what these two "network" cars will do the road or on the information superhighway. But it is clear that you'll see a lot of things at least some of them on the "open road" at your local car dealer's lot sometime soon. ☐

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Wi-Lan's future in spread spectrum

By Geoff Whettnight

Some things in life just make plain good sense: laptop, Apple pie and air travel. But it's not so obvious as to how about wire-free e-mail and wireless access?

One company that is enjoying real commercial success in bringing data communications and wireless technologies together is Calgony-based Wi-Lan Inc. Its goal is to use "spread spectrum" technology to enable a whole range of wireless data communications applications, including high-speed wireless Internet access.

The beauty of spread spectrum is that it allows a radio signal containing data to be spread over a frequency range greater than the minimum bandwidth used for radio-based data transfer applications. This minimizes interference that may exist at any specific frequency and ensures the level of security of the data transmission (because the data is not tied to a frequency at any single frequency). The company also claims significant power for data transfer speeds of up to 30 Mbps per second in some applications, making it far faster than any other low-bandwidth Internet connection currently available.

Wi-Lan was founded in 1991 by Steven Ashford (Government), Telephones (NGT, now known as Telcel) and researcher Dr. Steven Zaglad and University of Calgary professor Dr. Michael Fowler.

In 1995, the company's technology was moved into an intriguing number of areas, starting in 1995 with the release of its Hopper CD wireless modem. The Hopper allowed customers such as fax-to-fax-based and geo-producers Wireless Energy to instantly monitor oil well status in distant local area.

Wi-Lan has used wireless technology to provide wireless "Wi-Lan bridges" to connect networks with local spread of a set of emergency call-taking infrastructure. This solution was used by the Maritime West school district to reach entire district to create a wireless wide area network (WAN) that could be used in disaster.



Wi-Lan CEO Dr. Steven Ashford

as 15 schools, a library, several other schools, hospitals and 1,500 computers—and 100,000 users in the district.

At the end of this year, the company announced that it had signed a contract with Telcel U.K. Ltd. to be a subsidiary of the British mobile telephone network. It will supply a "wireless local loop" system for a national wireless data network in the United Kingdom. The goal will be to offer high-speed Internet access and e-mail services to small and medium-sized businesses and to connect existing employees, ranging from the well-known Thomson Valley area outside London.

The company has promised that the service will offer connection speeds at up to 2 Mbps per second (about 15 times faster than is currently possible over the ISDN high-speed line) available to small British Internet users and will become available in limited areas starting next year with the capacity to reach 60 per cent of the United Kingdom by 2001.

According to Zaglad, who is currently president and chief executive officer of Wi-Lan, all of these opportunities began with a realization in the early 1980s that data transmission also played a role in going to be a huge opportunity, whether those places were wireless or land line-based.

He says for example that while data traffic on land lines went from being negligible in 1970 to 40 per cent of the market by 1990, it only made another 10 per cent in 1991—1992. It was not until the mid-1990s that data traffic in general went from being negligible to being a high as 75 percent of the volume on land lines, according to the report. That means that wireless data traffic is still a small fraction of the total.

Zaglad says the contract in the U.K. plus other foreign deals like the United States and Germany in China, should ensure that Wi-Lan is not a "one-trick pony" and that its technology is both powerful enough and powerful enough to make a real difference in the wireless data market. As part of its growth, the company recently went public, although Zaglad says he does not worry about the cost

of a founder being control of it. At the point was a sign and he held to ground it.

"It is a significant decision to say you're not a sign and he held to ground it. At the point was a sign and he held to ground it. At the point was a sign and he held to ground it."

As for its main objective, it is to build and already the company Wi-Lan runs several subsidiary operations, including Calgony-based Calcel, which produces cell phone systems for mobile telephone companies that need to comply with ISDN, IS-55, IS-63, IS-64, IS-65, IS-66, IS-67, IS-68, IS-69, IS-70, IS-71, IS-72, IS-73, IS-74, IS-75, IS-76, IS-77, IS-78, IS-79, IS-80, IS-81, IS-82, IS-83, IS-84, IS-85, IS-86, IS-87, IS-88, IS-89, IS-90, IS-91, IS-92, IS-93, IS-94, IS-95, IS-96, IS-97, IS-98, IS-99, IS-100, IS-101, IS-102, IS-103, IS-104, IS-105, IS-106, IS-107, IS-108, IS-109, IS-110, IS-111, IS-112, IS-113, IS-114, IS-115, IS-116, IS-117, IS-118, IS-119, IS-120, IS-121, IS-122, IS-123, IS-124, IS-125, IS-126, IS-127, IS-128, IS-129, IS-130, IS-131, IS-132, IS-133, IS-134, IS-135, IS-136, IS-137, IS-138, IS-139, IS-140, IS-141, IS-142, IS-143, IS-144, IS-145, IS-146, IS-147, IS-148, IS-149, IS-150, IS-151, IS-152, IS-153, IS-154, IS-155, IS-156, IS-157, IS-158, IS-159, IS-160, IS-161, 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Not just a pretty face

The brains behind the technology of Wi-Lan's high-speed wireless Internet access system is Steve Lurie, the son of legend who started in more than 35 years with the likes of Clark Gable, Charles Coburn, Judy Garland and Spence Tracy.

At 35, Lurie developed what is now called "spread spectrum" technology, which reduces the time in layman's terms could account for the success of the system, says Lurie.

The plan called what they called the Spread Communications System as an international effort intended for use in the United States in Second World War.

The system was intended to guide airplanes to their target without enemy interception by sending messages over a radio frequency in a narrow pattern. As a message was sent back to the system and the receiver would track the message according to a spread code. The code according to this pattern of dots at the end of its transmission. The message would move to quickly across the radio waves that anyone trying to use a particular frequency would only hear a tiny and would be unable to translate or intercept the message.

The system technology has proven useful to assist with Internet telephone and Internet access and is used today in a range of military and civilian applications.

Lurie's first role in military technology came when he joined the military in his early 20s to join the United States of Europe's largest electronics manufacturers. He later left the military and moved to the United States after fighting for his first time.

In 1941, Lurie and Ashford sent the invention to the National Inventors Council. They received some initial feedback with an early patent, and submitted their patent proposal. They were awarded U.S. Patent 2,292,387 by the Second Communications System on April 11, 1942.

The patent rights expired in 1978, but at the time, they were being used to develop digital components replaced many other electronic special operations systems developed from the 1942 patent was used to handle access communications for the U.S. during the 1942 Cuban Missile Crisis.

The end, as they say, is history.

Wireless email at sea

LOS ANGELES (AP)—The world's first wireless e-mail system will launch next month, says Calgony-based Wi-Lan Inc. The system will allow users to send e-mail messages over a radio frequency, not a landline. The system will be used by the Maritime West school district to reach entire district to create a wireless wide area network (WAN) that could be used in disaster.

Cyral guests can send an e-mail message from the ship to a landline or to a wireless phone. Only 100 messages per day, up to 25,000 bytes, or right to a text-based page including attachments. Cyral did not say how much it charges guests to receive messages.

"With the world's largest e-mail subscription, we will be the number one e-mail service in the world, doubling every year, then more."

More than the Internet, however, the system is available to the wireless users who can't get the Internet out of their systems. Guests can send e-mail to computer hosts and have new programs in specially coded text, dedicated line space on each ship equipped with 22 computer workstations.

And as those people who cannot before the thought of not having a PC constantly at their side, they can use wireless computers and even receive e-mail messages, private information.

Imagine. Go on a cruise, send your e-mail. —Bob Wood

Guests can send e-mail to computer hosts and have new programs in specially coded text, dedicated line space on each ship equipped with 22 computer workstations.

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Wi-Lan's Hopper CD wireless modem

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CPU	MEMORY	VIDEO CONTROLLER	VIDEO CARDS
Intel Pentium 586/60/66/68/75/80/90/100/120/133/150/166/180/200/233/266/300/333/366/400/450/500/550/600/660/700/750/800/866/900/950/1000/1100/1200/1300/1400/1500/1600/1700/1800/1900/2000/2100/2200/2300/2400/2500/2600/2700/2800/2900/3000/3100/3200/3300/3400/3500/3600/3700/3800/3900/4000/4100/4200/4300/4400/4500/4600/4700/4800/4900/5000/5100/5200/5300/5400/5500/5600/5700/5800/5900/6000/6100/6200/6300/6400/6500/6600/6700/6800/6900/7000/7100/7200/7300/7400/7500/7600/7700/7800/7900/8000/8100/8200/8300/8400/8500/8600/8700/8800/8900/9000/9100/9200/9300/9400/9500/9600/9700/9800/9900/10000/10100/10200/10300/10400/10500/10600/10700/10800/10900/11000/11100/11200/11300/11400/11500/11600/11700/11800/11900/12000/12100/12200/12300/12400/12500/12600/12700/12800/12900/13000/13100/13200/13300/13400/13500/13600/13700/13800/13900/14000/14100/14200/14300/14400/14500/14600/14700/14800/14900/15000/15100/15200/15300/15400/15500/15600/15700/15800/15900/16000/16100/16200/16300/16400/16500/16600/16700/16800/16900/17000/17100/17200/17300/17400/17500/17600/17700/17800/17900/18000/18100/18200/18300/18400/18500/18600/18700/18800/18900/19000/19100/19200/19300/19400/19500/19600/19700/19800/19900/20000/20100/20200/20300/20400/20500/20600/20700/20800/20900/21000/21100/21200/21300/21400/21500/21600/21700/21800/21900/22000/22100/22200/22300/22400/22500/22600/22700/22800/22900/23000/23100/23200/23300/23400/23500/23600/23700/23800/23900/24000/24100/24200/24300/24400/24500/24600/24700/24800/24900/25000/25100/25200/25300/25400/25500/25600/25700/25800/25900/26000/26100/26200/26300/26400/26500/26600/26700/26800/26900/27000/27100/27200/27300/27400/27500/27600/27700/27800/27900/28000/28100/28200/28300/28400/28500/28600/28700/28800/28900/29000/29100/29200/29300/29400/29500/29600/29700/29800/29900/30000/30100/30200/30300/30400/30500/30600/30700/30800/30900/31000/31100/31200/31300/31400/31500/31600/31700/31800/31900/32000/32100/32200/32300/32400/32500/32600/32700/32800/32900/33000/33100/33200/33300/33400/33500/33600/33700/33800/33900/34000/34100/34200/34300/34400/34500/34600/34700/34800/34900/35000/35100/35200/35300/35400/35500/35600/35700/35800/35900/36000/36100/36200/36300/36400/36500/36600/36700/36800/36900/37000/37100/37200/37300/37400/37500/37600/37700/37800/37900/38000/38100/38200/38300/38400/38500/38600/38700/38800/38900/39000/39100/39200/39300/39400/39500/39600/39700/39800/39900/40000/40100/40200/40300/40400/40500/40600/40700/40800/40900/41000/41100/41200/41300/41400/41500/41600/41700/41800/41900/42000/42100/42200/42300/42400/42500/42600/42700/42800/42900/43000/43100/43200/43300/43400/43500/43600/43700/43800/43900/44000/44100/44200/44300/44400/44500/44600/44700/44800/44900/45000/45100/45200/45300/45400/45500/45600/45700/45800/45900/46000/46100/46200/46300/46400/46500/46600/46700/46800/46900/47000/47100/47200/47300/47400/47500/47600/47700/47800/47900/48000/48100/48200/48300/48400/48500/48600/48700/48800/48900/49000/49100/49200/49300/49400/49500/49600/49700/49800/49900/50000/50100/50200/50300/50400/50500/50600/50700/50800/50900/51000/51100/51200/51300/51400/51500/51600/51700/51800/51900/52000/52100/52200/52300/52400/52500/52600/52700/52800/52900/53000/53100/53200/53300/53400/53500/53600/53700/53800/53900/54000/54100/54200/54300/54400/54500/54600/54700/54800/54900/55000/55100/55200/55300/55400/55500/55600/55700/55800/55900/56000/56100/56200/56300/56400/56500/56600/56700/56800/56900/57000/57100/57200/57300/57400/57500/57600/57700/57800/57900/58000/58100/58200/58300/58400/58500/58600/58700/58800/58900/59000/59100/59200/59300/59400/59500/59600/59700/59800/59900/60000/60100/60200/60300/60400/60500/60600/60700/60800/60900/61000/61100/61200/61300/61400/61500/61600/61700/61800/61900/62000/62100/62200/62300/62400/62500/62600/62700/62800/62900/63000/63100/63200/63300/63400/63500/63600/63700/63800/63900/64000/64100/64200/64300/64400/64500/64600/64700/64800/64900/65000/65100/65200/65300/65400/65500/65600/65700/65800/65900/66000/66100/66200/66300/66400/66500/66600/66700/66800/66900/67000/67100/67200/67300/67400/67500/67600/67700/67800/67900/68000/68100/68200/68300/68400/68500/68600/68700/68800/68900/69000/69100/69200/69300/69400/69500/69600/69700/69800/69900/70000/70100/70200/70300/70400/70500/70600/70700/70800/70900/71000/71100/71200/71300/71400/71500/71600/71700/71800/71900/72000/72100/72200/72300/72400/72500/72600/72700/72800/72900/73000/73100/73200/73300/73400/73500/73600/73700/73800/73900/74000/74100/74200/74300/74400/74500/74600/74700/74800/74900/75000/75100/75200/75300/75400/75500/75600/75700/75800/75900/76000/76100/76200/76300/76400/76500/76600/76700/76800/76900/77000/77100/77200/77300/77400/77500/77600/77700/77800/77900/78000/78100/78200/78300/78400/78500/78600/78700/78800/78900/79000/79100/79200/79300/79400/79500/79600/79700/79800/79900/80000/80100/80200/80300/80400/80500/80600/80700/80800/80900/81000/81100/81200/81300/81400/81500/81600/81700/81800/81900/82000/82100/82200/82300/82400/82500/82600/82700/82800/82900/83000/83100/83200/83300/83400/83500/83600/83700/8380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157600/157700/157800/157900/158000/158100/158200/158300/1			

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Editor's Choice
(June, 1998)



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-Hacker/PC (Mag. 1998), Japan

"Among 18 different 440BX motherboards, GIGABYTE GA 686BX shows its best performance under Sysmark 32 with Win 95 (25%) and NT 4.0 (18%). The board is one of most recommended products."

-CTMagazine (MAY 1998), Germany

"In terms of speed, the report shows that 440BX gets 7% higher than the other brand's motherboard. The editor speculates that GIGABYTE motherboard has special technical support or wiring design so that its speed can be faster than other same range products. Diversity speaking, GIGABYTE motherboard surely those users who have speed and stability demand."

-DOS/V (Mag. 1998), Japan

"After testing under Windows 95, Win97 and Linux 97, the report shows that GA-686BX wins the best performance and its speed gets 6% higher than the other same range motherboard. Thus GIGABYTE motherboard still takes the lead in terms of performance in motherboard field."

-ASCII DOG/V (Mag. 1998), Japan

"WinMark 98 scores in this roundup. The GIGABYTE motherboard and Intel 440BX chipset contributed to the fastest CPU/Mark 32 score among 230-MHz systems..."

-PC Magazine U.S.A. (June, 1998)

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FTC misinterpreted antitrust law, Intel says

[illegible]

SANTA CLARA, Calif. (ENR)—Intel Corp. spokesperson Chuck Keeling responded to the complaint filed to early January by the U.S. Federal Trade Commission (FTC) by saying that the government agency is "trying a new law that says competitors can sue to not have the right to exercise intellectual property rights." The case could take more than a year to conclude.

The FTC complaint alleges that world-famous artists' information is being traded company-to-company such as Digital Equipment Corporation and Cinespace Company in order to stifle competition and restrict innovation.

While local says the company plans to follow a prescribed declassification process, it is clearly ready to vigorously defend its actions. And the company's stance is based upon a mistaken interpretation of the law and the facts.

"You are being too closed to intellectual property and truly complex, as its products with a number of key customers," said P. Thomas Ouellet, Intel vice president and general counsel. "These customers work with Intel in developing products for the market on a mutually beneficial basis. We believe the ultimate beneficiaries of this approach have been customers because they get the latest technology and find products as soon as possible."

"The open-source's doctrine underpins digital. But they want to change the way they operate, which we've found too pedantic," Ouellet said. "It's impossible in the software chain."

The complaint was filed as an internal FTC action, which goes to an FTC administrative law judge (or, in some instances, familiar with the process, may avoid taking time to meet for the case to be heard).

According to Mulloy, the judges divide 60 recommendations in three groups: by two five-member FTC commissions when that can also present its objections. If the panel accepts the judge's recommendation, that still has the right to file an appeal in a federal court. On the other hand, the FTC has appeal rights should dissent to be the judge's decision.

The final phase with the administrative budget could take as long as one year. An appeal could extend the case for several years.

But could this be the decision by the FCC attempt to assert a new legal theory under antitrust law. Mulley said the FCC has to show harm to competition as a requirement of an antitrust claim. "The damages is to the PC driving marketplace," he continued. "They cannot show any harm to this area. Therefore, plaintiffs have to do with monopolization and we have a number of counterfactual arguments with leading economists in that area."

"The FCC's theory treats a company with high market power like the local company in the broadcast property rights case against a company that doesn't do any business and, even, when it has to go head-to-head with it," Malloy also said. "The Supreme Court has already rejected this theory."

"It is not our belief that the administrative process will conclude that our actions and practices are lawful," he said.

According to the complaint, the three companies tried to enforce their own patent on computer parts and technology that was used by manufacturing vital technical information and threatening to cut off the supply of them, the FTC alleges.

The market for microprocessors is growing, either firms begin making their own processors, other firms will have little incentive to invent new features to challenge Intel's dominance," said William J. Baum, director of the FTC's Bureau of Competition. Baum said Intel feared the three competitors to their x86-based processor

In general, industry observers say the rate will have far less impact on hard-ware sales than business matters such as PC sales and other market trends. Currently, the POC

All paid: Once it was announced that Administrative Law Judge James Hensley had granted Inhofe's request to delay the deadline to respond to the FPC, at least one complaint level would begin generating its case before the judge.

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Region	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60	2060-61	2061-62	2062-63	2063-64	2064-65	2065-66	2066-67	2067-68	2068-69	2069-70	2070-71	2071-72	2072-73	2073-74	2074-75	2075-76	2076-77	2077-78	2078-79	2079-80	2080-81	2081-82	2082-83	2083-84	2084-85	2085-86	2086-87	2087-88	2088-89	2089-90	2090-91	2091-92	2092-93	2093-94	2094-95	2095-96	2096-97	2097-98	2098-99	2099-00	2100-01	2101-02	2102-03	2103-04	2104-05	2105-06	2106-07	2107-08	2108-09	2109-10	2110-11	2111-12	2112-13	2113-14	2114-15	2115-16	2116-17	2117-18	2118-19	2119-20	2120-21	2121-22	2122-23	2123-24	2124-25	2125-26	2126-27	2127-28	2128-29	2129-30	2130-31	2131-32	2132-33	2133-34	2134-35	2135-36	2136-37	2137-38	2138-39	2139-40	2140-41	2141-42	2142-43	2143-44	2144-45	2145-46	2146-47	2147-48	2148-49	2149-50	2150-51	2151-52	2152-53	2153-54	2154-55	2155-56	2156-57	2157-58	2158-59	2159-60	2160-61	2161-62	2162-63	2163-64	2164-65	2165-66	2166-67	2167-68	2168-69	2169-70	2170-71	2171-72	2172-73	2173-74	2174-75	2175-76	2176-77	2177-78	2178-79	2179-80	2180-81	2181-82	2182-83	2183-84	2184-85	2185-86	2186-87	2187-88	2188-89	2189-90	2190-91	2191-92	2192-93	2193-94	2194-95	2195-96	2196-97	2197-98	2198-99	2199-00	2200-01	2201-02	2202-03	2203-04	2204-05	2205-06	2206-07	2207-08	2208-09	2209-10	2210-11	2211-12	2212-13	2213-14	2214-15	2215-16	2216-17	2217-18	2218-19	2219-20	2220-21	2221-22	2222-23	2223-24	2224-25	2225-26	2226-27	2227-28	2228-29	2229-30	2230-31	2231-32	2232-33	2233-34	2234-35	2235-36	2236-37	2237-38	2238-39	2239-40	2240-41	2241-42	2242-43	2243-44	2244-45	2245-46	2246-47	2247-48	2248-49	2249-50	2250-51	2251-52	2252-53	2253-54	2254-55	2255-56	2256-57	2257-58	2258-59	2259-60	2260-61	2261-62	2262-63	2263-64	2264-65	2265-66	2266-67	2267-68	2268-69	2269-70	2270-71	2271-72	2272-73	2273-74	2274-75	2275-76	2276-77	2277-78	2278-79	2279-80	2280-81	2281-82	2282-83	2283-84	2284-85	2285-86	2286-87	2287-88	2288-89	2289-90	2290-91	2291-92	2292-93	2293-94	2294-95	2295-96	2296-97	2297-98	2298-99	2299-00	2300-01	2301-02	2302-03	2303-04	2304-05	2305-06	2306-07	2307-08	2308-09	2309-10	2310-11	2311-12	2312-13	2313-14	2314-15	2315-16	2316-17	2317-18	2318-19	2319-20	2320-21	2321-22	2322-23	2323-24	2324-25	2325-26	2326-27	2327-28	2328-29	2329-30	2330-31	2331-32	2332-33	2333-34	2334-35	2335-36	2336-37	2337-38	2338-39	2339-40	2340-41	2341-42	2342-43	2343-44	2344-45	2345-46	2346-47	2347-48	2348-49	2349-50	2350-51	2351-52	2352-53	2353-54	2354-55	2355-56	2356-57	2357-58	2358-59	2359-60	2360-61	2361-62	2362-63	2363-64	2364-65	2365-66	2366-67	2367-68	2368-69	2369-70	2370-71	2371-72	2372-73	2373-74	2374-75	2375-76	2376-77	2377-78	2378-79	2379-80	2380-81	2381-82	2382-83	2383-84	2384-85	2385-86	2386-87	2387-88	2388-89	2389-90	2390-91	2391-92	2392-93	2393-94	2394-95	2395-96	2396-97	2397-98	2398-99	2399-00	2400-01	2401-02	2402-03	2403-04	2404-05	2405-06	2406-07	2407-08	2408-09	2409-10	2410-11	2411-12	2412-13	2413-14	2414-15	2415-16	2416-17	2417-18	2418-19	2419-20	2420-21	2421-22	2422-23	2423-24	2424-25	2425-26	2426-27	2427-28	2428-29	2429-30	2430-31	2431-32	2432-33	2433-34	2434-35	2435-36	2436-37	2437-38	2438-39	2439-40	2440-41	2441-42	2442-43	2443-44	2444-45	2445-46	2446-47	2447-48	2448-49	2449-50	2450-51	2451-52	2452-53	2453-54	2454-55	2455-56	2456-57	2457-58	2458-59	2459-60	2460-61	2461-62	2462-63	2463-64	2464-65	2465-66	2466-67	2467-68	2468-69	2469-70	2470-71	2471-72	2472-73	2473-74	2474-75	2475-76	2476-77	2477-78	2478-79	2479-80	2480-81	2481-82	2482-83	2483-84	2484-85	2485-86	2486-87	2487-88	2488-89	2489-90	2490-91	2491-92	2492-93	2493-94	2494-95	2495-96	2496-97	2497-98	2498-99	2499-00	2500-01	2501-02	2502-03	2503-04	2504-05	2505-06	2506-07	2507-08	2508-09	2509-10	2510-11	2511-12	2512-13	2513-14	2514-15	2515-16	2516-17	2517-18	2518-19	2519-20	2520-21	2521-22	2522-23	2523-24	2524-25	2525-26	2526-27	2527-28	2528-29	2529-30	2530-31	2531-32	2532-33	2533-34	2534-35	2535-36	2536-37	2537-38	2538-39	2539-40	2540-41	2541-42	2542-43	2543-44	2544-45	2545-46	2546-47	2547-48	2548-49	2549-50	2550-51	2551-52	2552-53	2553-54	2554-55	2555-56	2556-57	2557-58	2558-59	2559-60	2560-61	2561-62	2562-63	2563-64	2564-65	2565-66	2566-67	2567-68	2568-69	2569-70	2570-71	2571-72	2572-73	2573-74	2574-75	2575-76	2576-77	2577-78	2578-79	2579-80	2580-81	2581-82	2582-83	2583-84	2584-85	2585-86	2586-87	2587-88	2588-89	2589-90	2590-91	2591-92	2592-93	2593-94	2594-95	2595-96	2596-97	2597-98	2598-99	2599-00	2600-01	2601-02	2602-03	2603-04	2604-05	2605-06	2606-07	2607-08	2608-09	2609-10	2610-11	2611-12	2612-13	2613-14	2614-15	2615-16	2616-17	2617-18	2618-19	2619-20	2620-21	2621-22	2622-23	2623-24	2624-25	2625-26	2626-27	2627-28	2628-29	2629-30	2630-31	2631-32	2632-33	2633-34	2634-35	2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WAGE	200	275	350	425	500	575	650
Unemployed Male	0.00	0.19					
Unemployed Female			0.00				
Unemployed in 1990		0.00	0.00	0.00	0.00	0.00	0.00
Unemployed Male	0.00	0.00					
Unemployed in 1990			0.00	0.19			

FILM

Memory type	4GB	8GB	16GB	32GB	64GB
Regular RAM	80				
Regular + 2GB for cache	88	90	95	98	CALL
Regular + 4GB for cache	90	95	98	99	CALL
7.7.1.5	94	96	98	99	CALL
7.7.1.6			98	99	CALL
7.7.1.7				99	CALL
7.7.1.8					CALL

NOTES

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Faces developer hits jackpot with America's Most Wanted

By Andrei Sahayev

Faces developer, the first and foremost of the software program America's Most Wanted TV. Faces is "the most advanced way of software" he has ever seen.

I have traveled throughout the United States and seen some serious work as well as this to-light come on television," he said when trying the program in Washington D.C.

What is Faces? It's a software application developed by International Faces Corp. that can take 2000 photos and create a composite face including 400 different types of eyes and eyes to create a composite face.

When an image is chosen and put in place on the computer screen, it automatically has motion built with all the other features of the face," explains Jeffrey Lavinia, CEO of International Faces. "But there is also

lots of work for making the composite more as close to reality as possible. The speed between the eyes can be reduced as the speed of the photo made more precisely the face closer and so on."

The finished product is as close to a photograph as you can get and police departments have expressed "enormous" interest in the product.

Faces said the product is much he would have bought International Faces, the company set up by Cole and Lavinia in market faces, but it was for sale.

International Faces' first product, which shows an audience of 80 million Americans each Tuesday night, offered a full endorsement of the program in deciding to use it to draw photographic composites of the suspected criminals on the computer.

The producers of the TV program also offered to sell Faces through the American Wire Photo and to handle the marketing of the software in the United States.

"They just asked us what we wanted and said yes to everything we asked," Cole reported.

"The only thing they could not guarantee was to have the software downloaded on the Open show. But they promised they would work on it."

"One of the major problems, investigators face with composite pictures is that because of

the lack of precision in the drawing, the ability of people looking for the person is a little quite high," says Cole who spent 10 years developing Faces.

"With Faces, anyone including even a child can in a few minutes compare a picture that really looks like a photograph of the suspect and thus reduce substantially the risk of errors."

What is also particularly exciting for police departments is that all the elements used to compose a picture on the computer screen are stored, which means a picture can

be sent back into the system to be altered as a suspect is ruled out and not a drawing.

"The saving in time is tremendous. Time is invaluable," adds Cole.

The new database is so large that it is possible to create a composite picture of police from all cities in a state can be created with no problem.

The program also comes with a variety of facial features that the face that is being composed.

America's Most

Wanted has scheduled to launch its premier of the product around the middle of September.

"The official launch will include the live distribution of 75,000 CD-ROMs containing Faces to all police stations in the United States and Canada."

The director of the program also plans to offer the program to schools. Educators will have used the program have said it is very easy to use that face can be seen to use it in minutes, according to its developers.

"But more importantly, they are convinced that Faces will help children to shape their observation skills by training to play more attention to facial details," says Cole.

In its current version, Faces can only create black and white composite pictures but Cole is already working on adding color to better reproduction of eye color and skin tones.

The producers of America's Most Wanted say tips from people watching composite pictures aired by the program have led to the arrest of over 200 wanted criminals in the past 10 years.

Ben Roberts CEO, the deal with American Wire Photo seems the heavy. All the results capital companies that he approached in interested to get financial support for his project had rejected him without any consideration. □



In brief

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TECHNOLOGY SOLUTIONS FOR BUSINESS IN CANADA

AUGUST 1998

Oracle database for PalmPilot
BOSTON (IBM)—Oracle Corp. and 3Com Corp.'s Palm Computing have announced plans for the first database to run directly on a handheld computer.

For portability, Oracle Lab, and Oracle will actually produce a Palm/Oracle kit in Oracle Lab mobile computing device line in the fall of next year by a "fall forward" release of Oracle Lab Inc.'s PalmPilot and Palm OS programs, as well as for Palm Computing platforms from IBM and Symbol Technologies.

The technology will actually allow for sharing of database information between a handheld PC software, such as a Palm Connect, for the release in August, and a handheld PC running Oracle Lab. This will require a "fall forward" release will add the ability to run new database synchronization and replace one between a handheld PC and other a notebook running Oracle Lab in Oracle's "big" database according to Labey.

Oracle Lab (www.oracle.com)
3Com (www.3com.com)

HP Rapid family grows
MISSISSAUGA—Hewlett-Packard Canada Ltd. has introduced three new HP Rapid PCs: Workstream models, which feature new HP-developed technologies. These new systems will be powered by 250 MHz and 400 MHz Pentium II processors, and the Intel 486DX2 A2100 with 100 MHz front-side bus. HP says they will provide superior performance, configurability and reliability for performance-driven PC workstation customers. The new models are the X45, X52, and new X55 systems.

The new HP technologies used in the Rapid line use HP's Windows as embedded management system with LCD display for management of key system components. HP's TriTech desktop management strategy (TMD) PC management software for advanced system and network diagnostics. HP's FastRAID is SCSI adapters that use RAID technology to improve system performance during disk-intensive operations, and HP's UltraView is a system for keeping critical components cool.

HP info line: 800-441-4444

Rapid Web support expands
MISSISSAUGA—In conjunction with the new Rapid models, Hewlett-Packard Canada introduced new support capabilities for all Rapid Workstream customers. The enhancements will allow customers to access and download technical information without calling a special hotline. According to HP, the new features include online user manuals, online technical support, online advanced, interactive troubleshooting of new information posted on the Web site, online and downloadable product manuals in multiple local languages and the ability to view new content before downloading software.

HP info line: 800-441-4444

Informware, Lemark ink deal
OAKBROOK—Informware Wireless Managing Inc. has announced an agreement with Lemark International Ltd. and its Informware center and supply a customized printing solution to enable the Lemark Open L-10 to serve as the computer with Microsoft equipment.

Continued on page 2

Doing business with the government
Are you interested in selling products or services to the Canadian federal government, but don't know where to begin? Or, perhaps you've tried but got lost in a sea of paper, a world of confusing jargon and difficult processes, and gave up. You're not alone.

By Michelle Schreffers and Curtis Cook

Many Canadians who run small businesses are walking along the same path when it comes to doing work for the government. But the same companies, finding a way through the confusion and learning how governments work is the key to success.

Alan Jank, president of Ottawa-based AJJA Information Technology Consultants Inc., leads a company that helps in R25 and has words of business every year because of its success in working with the federal government. Says Jank, "You need a lot of patience and you need a lot of persistence. Obviously, you have to be skilled. But you have to be skilled doesn't mean you're going to get the work. It takes time." Jank started AJJA in 1990 and making the transition from government work to the private sector. And, in part off.

From an humble beginning less than 20 years ago, AJJA now employs 200 people and offers extensive project management, development of client services and Web sites, technical consulting, and testing services for the Year 2000 (Y2K) problem. The company is also an authorized reseller of software for developing systems.

Continued on page 2



Strategis a storehouse of business info

If you haven't checked out Strategis, Industry Canada's online warehouse of business and consumer resources, you could be missing out on free information that is critical to your company's success.

By Adriana Barton

Since Industry Canada's developer of Canada's largest online warehouse of government-related data launched in March 1996, Strategis has been more than one million documents and is an extensive source of information for business, according to Tim Garand, chief information officer of Industry Canada.

Small and medium-sized enterprises

Continued on page 10



The rules of engagement

It's one of my personal mantras: I've created a small private business. About 50 percent of my personal revenue now flows from Internet sales. We always looked on that as a side-by-side gig. On the one hand, a government contractor is like money in the bank.



There may be less of the customer going bankrupt as of selling you with an "NOT" charge. And business level is a little bit locked by a government purchase order.

And dealing with government purchases required lots of patience and lots of processing of forms and such. With just a few people to handle many calls—a typical reason for small businesses—we couldn't afford to devote as much time as we would have liked to pursuing sales government work.

Although it's not far from government contracting, people occasionally refer to no other thing business with government. The sales people in many and many ways about how government work is not constant because he knew someone who worked with someone who was right with the government's chief executive officer. It's just handling, just and simple.

There may be someone where this is the one rule of office: how when doing the purchase and open contract usually. I think in companies—and contractors—that smaller companies don't really have a chance to bid on these large or government contracts that go beyond in the daily way.

If you are one of those people who has dismissed government as a potential customer, there are two reasons why you might want to reconsider your position. First, government is a huge producer of goods and services. Secondly, government—particularly at the federal level—have taken steps to make the process more open and accessible.

Technology has played a big role in opening up government. The federal government's Open Government Web site, for example, is an online site projects and companies in the scope of information is provided. In many cases, information that was very difficult to find is now available to anyone with a computer and Internet access. A lot of the information

there did specifically with how to use a government contract, but it will provide all sorts of strategic information from government information to tips on improving your product.

Actually getting a contract paid for by the public goes a number of ways. For example, government contracting contracts a

new contracting system. Unfortunately, technology seems to be of much help in reducing the number of large you'll have to jump through to secure a contract. However, new developments like electronic contracting systems will automate some of the paperwork and also provide a centralized source of information about

what government purchases are looking for. The business is there. We need help more than a computer and Internet access is for the funds.

David Tanaka
Kobin, The E-Entrepreneur

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Digicam built into Vaio laptop

TOKYO (ENR)—Sony has unveiled a new notebook computer with built-in digital still camera at the recent Windows World Expo show in Tokyo.

The Vaio 505 was presented in prototype form at the exhibition and is described as specifications, launch date is yet to come. The machine doesn't run the Windows 95 operating system and featured a color liquid crystal display.

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- Microsoft PS/2 Mouse



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In total Continued from page 2

Others, and Thomas Blomquist. That is an addition to four DS-5 facilities continuing to be managed through Parsons Axiom Power (PAP)—the morning, parents of Tier 1 facilities (seven providers (PPI)).

"We pride ourselves on bringing Tier 1 (PPI) benefits to our customers," said Geoff Wynn, Parsons Canada vice president of operations and development. "Rather than having an upstream provider contracting to us the business we connect directly to the Canadian PAP and through the ICG. Parsons U.S. STM facilities we are directly connected to all as U.S. firms."

Parsons Canada info@parsons.ca

PCChecker for small business

SAN JOSE, Calif. (ENR)—Sony Electronics has announced a PCChecker series of upstart spy devices to provide backup protection for individuals companies in a 20480 small software effort up to a medium-sized workstation environment. The firm said the system is compatible with DOS, Windows 95 and NT, NetWare and OS/2.

"Sony has backup devices for everyone. You have storage choices from 4 GB to 58 GB

more (uncompressed data), more if you go to turntable configurations," according to a Sony spokesperson. An accelerated cycle several years, depending on the version chosen, the added.

Sony said the latest version of the digital data systems (DDR) storage device, the DDR-1 can store 4 GB (data on 8 full compression) or up to 16 GB (data on 16 full compression) or up to 32 GB (data on 32 full compression) or up to 64 GB (data on 64 full compression) or up to 128 GB (data on 128 full compression) or up to 256 GB (data on 256 full compression) or up to 512 GB (data on 512 full compression) or up to 1024 GB (data on 1024 full compression) or up to 2048 GB (data on 2048 full compression) or up to 4096 GB (data on 4096 full compression) or up to 8192 GB (data on 8192 full compression) or up to 16384 GB (data on 16384 full compression) or up to 32768 GB (data on 32768 full compression) or up to 65536 GB (data on 65536 full compression) or up to 131072 GB (data on 131072 full compression) or up to 262144 GB (data on 262144 full compression) or up to 524288 GB (data on 524288 full compression) or up to 1048576 GB (data on 1048576 full compression) or up to 2097152 GB (data on 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for both corporate and consumer use.

All of these features in one when ATI should be of interest to the average Canadian pc user and company user. Consumers only give a lot like an average computer user in the world, they suggest there is ATI but no one really wants and address problems.

All in one

Probably the latest ATI product for the consumer right now is the ATI All-in-Wonder Pro found. It provides you with a look at TV rates, video capture capabilities, high resolution graphics and a number of unique computer/TV features such as "remote control" features by receiving a few seconds of a TV broadcast into your front desk.

In corporate use, the ATI All-in-Wonder Pro product, as well as other models, is expected from the more robust of Microsoft Windows 98 operating system, ATI recently announced a series of product upgrades designed to take maximum advantage of Windows 98.

These products include a new version of the All-in-Wonder Pro 3D/3D video accelerator and TV tuner that is now capable of "broadcasting" Microsoft's Windows TV for Windows as well as providing video capture and TV out display. In addition, ATI's new line of SP/RT 98 board lines 3D/3D and video acceleration and 8 MB of SDRAM memory for the model uses of 3D.

Meanwhile, ATI says its new SP/RT 98 (based) is designed for some Windows 98 game players and offers 3D graphics, 3D and video acceleration with TV out display (which ATI expects to be used for large screen gaming) and a full 8 MB of SDRAM memory. ATI has designed all of these products for use with either Advanced Configuration (see AGP) or the PCI (Peripheral Component Interconnect) add-in modules.

ATI appears to have high hopes for the All-in-Wonder Pro (in ATI TV and SP/RT) series (which is a card) as well "fully enable" the Windows 98 WebTV for Windows feature. This will let you watch standard TV programs as well as new interactive television broadcasts on a Windows 98 PC.

Meanwhile, WebTV for Windows, which is designed to provide access to both TV programming and Web content through cable hook-up, promises to further promote new features and features such as Electronic Programming Guide where viewers can view programming information on screens. By merging these up, cable and cable company, Microsoft predicts that WebTV for Windows users will be able to find out what programs are coming on, view information about these shows, and access any TV show with a single click.

On board from birth

Over and over all of these developments, ATI has also been able to make up in the full due PC manufacturers are increasingly going to have ATI graphics technology built into their systems in the future. And this should be good news for consumers, as it will eliminate the need to have some users to go out and buy add-on boards to get improved graphics performance.

In June, for example, both Dell Computer and another Compaq agreed to use ATI

boards on their new PCs. ATI is going to RAGE (in step with the new 3D/3D/3D) and 3D corporate computers (including 3D and video acceleration) in their own PCs and more local companies to use.

Changing technology is helping to a degree different things to be achieving ATI's

goal. For example, Dell's new "Digital Vibe" LCD, as a corporate computer, "digital style" feature (including 3D/3D) and the new 3D/3D. The company's new 3D/3D (in the new 3D/3D) provides Corporate Computers and 3D/3D with systems with 3D/3D graphics to be used in a new board digital (in the new 3D/3D).

ATI is also supporting a series of "digital" features on its 3D/3D computers, including a "digital" 3D/3D display on some of the new 3D/3D and other upgrades (such as 3D/3D) and the 3D/3D in some with or without, also supporting new display adapters (3D/3D).

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Strategic investment of business info

Continued from page 11

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Color the only way to go with handhelds

Imagine that you lived in a world without color. Everything in life would be either black or white, with the odd bit of shading to make it a little more interesting.

And then, all of a sudden, you see a rainbow—and the world of black and white seems across the same again.

Well, it can almost feel like that happened to me. For years, I happily relied on monochrome handheld computers in taxis, planes and restaurants—using them to write and file notes from various locations around the world. And then came the advent of the color Windows CE 1.0 handheld systems last May.

At first, I was able to discern the color as a gimmick. "It will never catch on," I could hardly wait myself. I felt sure that the more data on battery power and the variable quality of the small LCD color screens available for use on handheld systems would severely limit their appeal.

I am no longer so sure about that. I am currently seven months into a year-long test of Sharp's amazing Mobilon HC 4500 Windows CE 1.0 color handheld computer—and have also recently spent several months using Hewlett-Packard's slightly larger HP 420LS. I still have a couple of Palm handheld systems that I use—think of the monochrome variety—and I am continuously finding a hard time going back to them after using the Sharp and the HP.

And it is largely the screen that makes the difference: since the Palm machines offer superior software, better keyboards and tend to be much more usable in operation. But now even when backgrounded or suspended on a color screen to simply sit on a desk in my lab. Likewise, "Web browsing on a handheld with a color screen—with no real graphics and color photos—is a superior experience to doing the same thing with a monochrome display.

None of this is to say, however, that the displays on the current crop of handheld color systems is perfect. For one thing, the size of the screen "real estate" means that it is generally only possible to view a 640x240 or "half-VGA" display.

When viewing large amounts of information (perhaps a big spreadsheet file), the size of display means that users often have to scroll a lot of time scrolling to get where they want to go. But at least having color allows you to, for example, draw regions, numbers in red, and even color charts and tables that you have created in a way that is more meaningful.

On the Sharp Mobilon, there is another good reason for enjoying a color display—it lets you look at any digital photos that you may have taken with the Mobilon's optional



ON
THE GO

Steve Wozniak

digital camera attachment. Combats that with the fact that the Mobilon includes a built-in modem to encourage you to use it to do your email and Web browsing and you have instant status for waiting a color screen on your handheld.

But you are probably thinking, there must be some other downside to having a color screen on a handheld. Otherwise, every handheld computer would have one. That may yet end up being the case in the near future.

Before that happens, handheld PC makers will first have to find a way of making those color screens start to cost a little less. This is one area where the display can strap order. Windows CE 1.0 will tell almost Monochrome LCDs on the other hand, and so be more effective in longer and lighter because they offer a strong contrast between a pale LCD background and dark black text.

Color screens also tend to consume much more energy. While systems with as little as Mobilon and the HP 420LS are starting to offering greater battery life, the types of batteries required will tend to be proprietary, though while battery packs last but standard AA batteries and battery life is measured in hours and not days.

To make color handheld systems an exciting—and really pretty impressive—line, screen that there are still trade-offs that you must be prepared to live with in order to get the color capability. My solution has been to carry a monochrome Palm handheld as my "second screen" to use the battery for the Mobilon to do HP during the period I was testing it as a second screen.

That is an extremely silly solution, but I saved me well on a screen top in France and the United Kingdom. I look forward to the day when I can use a single handheld with the color display capabilities and components of the Sharp Mobilon for long, heavy life, excellent keyboard and software reliability of the Palm Series 7, and the robustness and expandability of the HP 420LS. It will cut back the "pidgeon slant" on my luggage can suddenly and will allow me to accomplish even more with handheld systems than I already do. □

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Selling to the government: where to start?

By Michelle Schoffele & Curtis Cook

When it comes to how to do business with the federal government? Talk to your peers first and then the government has the advantage of information to help you decide if public sector contracts are a lucrative market for your business. And the information is free. There are companies willing to charge you for this but a few well-placed calls to staffers are the fastest way to get you in touch with the secret to success. Here are a few places to start.

Public Works and Government Services Canada (PWGSC) is the main purchaser of goods and services for the federal government. With more than \$5 billion in contracts awarded annually by the department, PWGSC is probably a good place to start your search. Like most federal departments, it has offices across Canada and can be found in the Government of Canada version of the blue pages or via telephone directory. The department's Web site (<http://www.pwgsc.gc.ca>) contains information on both Government Canada and PWGSC (also online at <http://www.pwgsc.gc.ca>).

Commerce Canada, under MEIC is an information source on how to sell to the federal government. It provides online information and brochures. **Commerce Canada** (which has its own Web site at <http://www.commercecanada.gc.ca>) also maintains a supplier registration service for Public Works, with the goal of connecting with company registration online for the federal government. You can find out more by calling PWGSC or Commerce Canada directly.

Are you new and small? Maybe you would like to register to buy some government property for the first time or use PWGSC to provide you with information on purchasing surplus federal government property. It has contact names and telephone numbers. Of course the provision and transportation fees don't apply to government but there may be some savings. **Business Canada** (1-800-426-1461) will get you back online (more on provincial and regional programs).

Department of Indian and Northern Affairs. Do you want to work for an Aboriginal firm? The federal government has programs in place to make a case for aboriginal companies to do business with government. As part of this program, the Department of Indian and Northern Affairs has created a directory of aboriginal businesses that can fulfill the government's procurement needs. It can be found on the department's Web site (<http://www.inac.gc.ca>).

Accessing the government's (p. 19) is a good place to find all business-related services. Once on the main menu, click on Business Support and Services and click on

Canada! The Canadian Management Network includes valuable information from the government and the Canadian Federation of Independent Business.

The Canada Business Service Centre (CBSC) may be the first contact for doing business with the government if the business is

one that needs of communication. CBSCs are located in every province and territory. The toll-free center for toll-free business information offers also toll-free support and advice about the online number of government programs and services provided. Government have given them the right information

You can drop into one of the centers or do research on your own with assistance if you are not the toll-free line or demand service.

Wherever you decide to start, prepare to be engaged in the business with the government. It takes a deep breath, pick up the phone, or log on. **Q**

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Scottish bank claims huge videoconferencing savings

By Sylvia Gennet

IBM/70/1, London (IBM)—The Royal Bank of Scotland claims that it is saving around £100,000 a month thanks to the use of videoconferencing links.

The bank backs up its claim by saying that it has been using videoconferencing links for 12 hours each day, and today more than 100 links exist within the U.K. and Kingdom of the Netherlands. According to bank officials, staff check up more than 60,000 hours a year in videoconferencing links, as well as staff time and costs that would otherwise be spent on traveling to meetings.

George Clarke, the bank's senior manager of sales and videoconferencing, said that videoconferencing has enabled the bank to open its branches across the whole U.K. and to open the bank's office in the Netherlands, as well as to open its office in the U.S. and to open its office in the U.S.

and within all levels of the bank's structure.

"Videoconferencing is more than a new method of communicating, but it is a new way of doing business," Clarke said. "It allows the bank to make more decisions and to help build a support with clients."

Clarke notes that videoconferencing is more than a new way of doing business, but it is a new way of doing business. It allows the bank to make more decisions and to help build a support with clients.

"It is also a new production way to do things and more importantly, it is a new way of doing things. It is a new way of doing things."

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"It is also a new production way to do things and more importantly, it is a new way of doing things. It is a new way of doing things."

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Visual communications give us a realistic and cost effective means of communicating, allows us to make faster decisions, and reduce the need for travel!"

—George Clarke, Royal Bank of Scotland

"Visual communications give us a realistic and cost effective means of communicating, allows us to make faster decisions, and reduce the need for travel!"

The bank, which is an international videoconferencing service, is a Philips digital service, income in branch, exchange, (PABX) network, has two studios in London, three in Edinburgh and one in Manchester, as well as 10 other digital systems in various other regions.

The bank is equipped with a bank of videoconferencing links, which is a bank of videoconferencing links, which is a bank of videoconferencing links.

In addition, the bank is an international videoconferencing service, is a Philips digital service, income in branch, exchange, (PABX) network, has two studios in London, three in Edinburgh and one in Manchester, as well as 10 other digital systems in various other regions.

According to Clarke, the bank encourages everyone throughout the business to use videoconferencing, from its primary departments to its central and human resource people.

Business news from **Compu-2000** is the Financial Mirror, the weekly business newspaper in Japan, is an the first and the first in the world. It is the first and the first in the world. It is the first and the first in the world.

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Minimizing liability when signing a lease: Part II

Last month we looked at various ways of protecting your financial interest when leasing space. For example, incorporate, set up a trust, hire a jointly owned leasing trust, or use a trust to protect and not signing a potential guarantee.

In the last part of this two-part series, we will cover various options to obtain low or reduced rent and construction allowances, and other resources on lease assignments, sublets or transfers.

How a landlord is willing to offer a first rent period or reduced rental payments to an owner to rent the premises. This is granted by the same words used in the lease of a space has been vacant for some time, when there is a lot of vacant office space on the market or when competition and incentives packages are very low. Try to negotiate rent payments in the first year to limit the financial outlay as much as possible. Here are some suggestions:

- Request a profit and loss reduced rental payment. Have the credit payments start in a low rate and gradually increase to the highest amount over months over the first year or more. This approach works may be less than the normal annual agreement rent for the subsequent years of the lease.
- Negotiate rent rate, on an annual or even up to a year rent rate. This amount of the rent will depend on the length of the lease. The compensation the tenant is paying for



SOHO

Douglas Galt

the upper of business (if it enhances the image of the building, as well as a business drive) the prevailing competition in the marketplace and other factors.

- **Ask for a five-year period.** In this example, possibly the first, fourth, eighth, and twelfth months would be free. This would provide the landlord with some cash flow throughout the year but would also provide the tenant with a monthly rent saving at a quarterly basis in the first year.
- **Try to have the landlord pay for all costs of construction up to an agreed maximum.** It depends on circumstances as to how much the landlord will be prepared to pay. For example, the landlord might be prepared to have a good interior in the building to draw other prospective tenants, and the tenant. This means might agree to a five-year lease on the basis that the landlord pay \$50,000 for improvements to a complete. Everything depends on the circumstances and your negotiating leverage. This should of circumstances commonly referred to as

improvements, would be one, and above any other resources you ask for.

Construction allowances

If the tenant is going to use newly constructed premises, provisions may be negotiated with the landlord to pay the tenant construction expenses. The provisions may state the landlord would pay to have all the landlord improvements done required by a tenant as a condition of the lease. It would be less expensive for the landlord to pay for such work if they are done when the landlord is paying for the overall construction of the building.

Lease assignments

You should be careful to ensure, your position of liability and risk before selling your lease and assigning the lease to a buyer. Otherwise, in the event that the buyer defaults on the terms of the lease, the landlord has the right to sue not only the buyer in the assignment, but also your company as the assignor. If the landlord is coming from personal guarantee (meaning you gave word at the time the lease is assigned), the tenant the agreement is an existing and signed by the landlord. The landlord can avoid personal guarantees from the lease of the business of the tenant.

Remember to adopt a very flexible and a tough negotiating position when entering a lease. Have a detailed survey done with

with the negotiations rather directly in order to have your resources give you, and don't make a lease package that has positive potential business or personal financial risk than your current load. Always compare things as you can maximize landlord in the market, providing in the marketplace a listing will negotiate the best deal.

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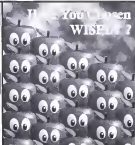
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Getting the goods (and bads) from BDC

The Business Development Bank of Canada and small business loans

By Ross MacDonald

You're a single mom, closing rates on your credit card to make the business credit file strong. You're also a bit of a risk taker, but you plan to diversify into other areas, so you want to be able to get a loan. You're also a bit of a risk taker, but you plan to diversify into other areas, so you want to be able to get a loan. You're also a bit of a risk taker, but you plan to diversify into other areas, so you want to be able to get a loan.

Don't despair. Canada's largest lender, the Business Development Bank of Canada (BDC), is a government-owned institution that provides a wide range of financing options to small businesses. It's not just a lender; it's also a provider of business advice and training. The BDC's mission is to help small businesses grow and create jobs. It offers a variety of financing options, including term loans, lines of credit, and venture capital. The BDC also provides business advice and training through its Small Business Development Centres (SBDCs).

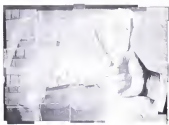
Financing small business

While the BDC is a government-owned institution, it is not a government department. It is a separate entity that operates under a mandate from the government. The BDC's mandate is to provide financing and business advice to small businesses. It is not a government department, but it is a government-owned institution. The BDC's mission is to help small businesses grow and create jobs. It offers a variety of financing options, including term loans, lines of credit, and venture capital.

Speaking to the BDC, Vice-President, Small Business Development, John Macdonald, says that the BDC's mission is to help small businesses grow and create jobs. He says that the BDC's mission is to help small businesses grow and create jobs. He says that the BDC's mission is to help small businesses grow and create jobs.

"We're not here to make loans to Bell Telephone, we're here to provide specialized financing to commercially viable small businesses that other banks might think are too high risk," says Macdonald. The BDC's mission is to help small businesses grow and create jobs. It offers a variety of financing options, including term loans, lines of credit, and venture capital.

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—John Macdonald, the BDC

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What BDC loans

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The AuroView 77g is not inexpensive, at \$490, but offers great refresh rates, great display quality and a good selection of user controls in the OSD. While the monitor may make the usual assumption for high-end digital graphic work at 1024x768, it is otherwise a respectable choice for most users.

**Pro**

- solid performance with minimal refresh-rate adjustment
- brightness/contrast/temperature control for quick adjustment
- great resolution with 38 cm dot pitch

AOR Microscan 5P-
From: 4800 Series
Tel: 800-228-0500
http://www.aor.com

See

- minimal OSD control settings

For a monitor worth \$399, the Microscan 5P- is a bit skippy on user controls in the OSD. Otherwise, the performance is impressive, with great display quality and minimal flicker and motion degradation.

AOC

Spectrum 77b-
From: Dynaflex/Express

Tel: 800-736-3677 <http://www.premco.com>

Pro

- great and varied OSD control in easy way to use
- good selection of image-shaping controls
- budget price only at \$329

See

- at 28 cm dot pitch, image is a bit coarse, but not too bad



This monitor is a pretty basic and temperamental unit, but for the most part of the OSD control, and the fact that it has smart magnification controls like brightness, parallel-contrast and color temperature makes it a great value. See.



CyberVision C73
From: STS Systems
Tel: 800-463-6760
<http://www.sts.net>

Pro

- 28 cm dot pitch provides nice crisp image
- good selection of image manipulation controls
- hard to see flicker or image

See

- 100-Hz refresh rate is one of the best in this class

At \$499, the CyberVision C73 is a bit more expensive than some of the "entry-level" monitors. But because the OSD with image-shaping options and performance, there's a great choice.



Optima 2712DAB
From: Delta
Tel: 800-728-6200
<http://www.deltacorp.ca>

Pro

- 28 cm dot pitch offers good resolution and great sharp image quality
- high refresh rates available

See

- short signal cord could be problematic if more than two users are connected to the monitor
- edges with a bit of fraying, and screen showed minor ghosting
- OSD option menu is a bit strange, so users can't see the vertical/horizontal scale and position, even at the bottom of the OSD, forcing use to scroll through the menu to find

Delta's OPTIMAD generally provides a crisp and clear picture, with some lack of focus and a bit of distortion around the edges of the screen on the side, but we think. Although it may become problematic for some users, it's still quite a competent and reliable monitor.



Digital Research Technologies D9000
From: Digital Research Technology Inc.
Tel: 800-328-4999
<http://www.digital.ca>

Pro

- OSD menu clearly labeled buttons, and is easy to use, and certain buttons double as user menu navigation buttons
- picture quality is quite good for a 28 cm dot pitch display

Continued on page 65

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
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Windows themes free and easy



By Scott Swenshky

I have been watching the great Windows debut at the U.S. Department of Justice with a mixture of awe and amusement. Some of the points being made may be valid, but it seems to me that the tone of the appearance of the desktop should be a non issue. It's pretty easy to modify the desktop and startup screens. Even a beginner can do it using Themes designed for Microsoft (but which is now included in Windows 95).

Themes are collections of icons, graphics, and sound files that combine to give a special look and feel to the computer's desktop. You can turn your PC into a shrine to your favorite cartoon character, or make it look like a New York restaurant. You can even make it look like a Mac! Windows 95 users have been able to customize their computers, and programmers have been creating our handful of new TUCOWS Themes for months now. You can download more than 5,000 different themes at our TUCOWS's theme-of-the-month at tucows.themes.com.

Coming your way desktop themes is not nearly as difficult as you might think. It is simply a matter of pulling together the materials you want. Once you've decided on a theme you want to find the sounds, images, icons and colors you want to use. Visit tucows.themes.com or tucows.themes.com and you will find many pages on your favorite subjects. Remember that most images and sounds in Web pages are commercial music, TV shows and movies are copyrighted. Before you publish your theme, approach any original authors or copyright holders for permission. Choose colors and fonts that complement each other. A wall hanging of colors might look cool, but it can be hard to look at for a prolonged period all day. I recommend wallpaper because it is a popular size and allows for maximal coloring and decoration at either higher or lower resolutions.

The most so long aspect of any desktop

theme is the wallpaper. Start with a large, high-resolution image and shrink it down after you have modified it. It is always better to reduce the size of the original than to have to stretch the image to fit.

The approximate file size of any background will depend greatly on the format you save it in. JPEG images compress better than GIF images in most quality.

Once you've chosen a background image for your theme, you can decide on the color scheme. Be especially careful to choose a color that contrasts with the various elements of the menu. If you intend to use a low-color theme, use a 256-color or lower and conform to the standard Windows color palette. You should use a 256-color palette.

When you choose a font, pick one that is commonly distributed with Windows. That way you won't need to include the font if you wish to share it and you must have to worry about copyright law. Font rules should not get with the rest of the rules, especially those of the menu enough to be readable from 960x640 to 1280x800. Be careful not to choose a font that becomes distorted at lower resolutions.

You will also have to make icons, which you should already exist in another form. You can get image editors online at TUCOWS. The most popular is Paint Shop Pro. Finding the right picture to use as an icon can be difficult. Look for images that have a large square portion, but will be clear when shrunk down. Once you have chosen the image, make it square to preserve before saving it as an icon in 48x48 pixels.

After it has been reduced, you will have to reduce the number of colors to 256. When doing so, tell the program to optimize the image and to use error diffusion. That will keep the look as close to the original as possible and still benefit from the color reduction. Save the image as a .BMP file.

Open your web browser software (Microsoft's Internet Explorer is a good choice) and open a new blank HTML file. In the address bar, enter <http://tucows.themes.com> and select the file saved above. Save the icon and you are done. Remember there are at least two icons to make: My Computer, Network Neighborhood, Recycle Bin, Drives, and Recycle Bin. All.

Customers are possibly the most difficult part of making an original theme, and most people choose to sell a pre-written set of icons and use them as their own. If you use the same icons type, you'll find the process of creating them from scratch is similar to the one above. Use icons that are in the same style as the Microsoft icons to make consistent results.

One of the key elements in any desktop theme are sounds. Making your own sounds is a simple process. You will need a sound editing program. You can find a variety of these programs at TUCOWS. Once you have decided on the software, you can edit existing sound files you found while gathering multimedia from the Web or record your own.

Try to select short sounds for Alerts, Exclamation, Default Sound, and Menu Sound, two to three seconds long at most, preferably one second or less. The Menu Sound should appear very frequently, and often new themes for it from the sounds they use are discarded after just a few listening because it's through the ears.

Do not set a sound for any page event or when



No digicam in Polaroid's imaging kit

By Russ MacDonell

It's cheaper to use a digital camera connected to a Polaroid Spectra AF camera than to use a Polaroid Spectra AF camera. The combination is a way to take photos and get them into your computer as quickly and easily as with a digital camera—but at a much lower cost. Though technically cheap to use, the Polaroid setup just doesn't deliver enough output to be a huge cam-

and is expensive to qualify as a genuine substitute for a digital camera.

Which is not to say that the Spectra AF isn't a great camera. It's easy to use. It has some incredible features (black control, white lines, automatic CR-DF) and takes up to a 100-megapixel shot. But the instant pictures it delivers are unimpressive and, unlike a digital camera, unusable if you don't like the results.

Polaroid Digital Imaging Kit

From Polaroid Canada Inc.

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Street price: \$150 (Selling for just \$30)

Platform support: Windows 3.11x, Mac OS

Software: Adobe Photoshop, Adobe Acrobat Reader

Polaroid Digital Photo Reader

Camera: Spectra AF, 100-megapixel (3x3 1/4 in.)

Weight: 800 g (2.5 lb) with lens cap

Power: External power supply (battery is not included)

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Software: Adobe Photoshop, Adobe Acrobat Reader

According to the spec, you can choose a 40-cm (15.7 in.) or a 10-cm (3.9 in.) lens. But I found people taking at 10-cm that range were not too far off. The 10-cm lens is too short when the lens is turned off. Color reproduction is pretty good and much better than the Polaroid of yore. But image quality is only marginal, which directly affects what comes out of the scanner.

The scanner is a nice little device but it's not really easy to hook up and begin using. It has an optical resolution of 3000 dpi, but that can be interpreted as a sliding scale up to as high as 4,000 dpi, which, though

it sounds impressive, costs huge multi-megabyte image files that aren't instantly perceptibly better than the much lower resolutions.

Polaroid offers this "kit" as an absolute no-frills digital photography kit for those on (or near) budgets who want a particularly comfortable with the new technologies. This combination of camera, scanner and software will do the job, but the results may leave you wishing they'd spent the extra \$300 to \$400 for an entry-level digital camera. Still, the Polaroid Digital Imaging Kit remains an alternative for budget-minded shoppers. □

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Couch potatoes move to the Net

WASHINGTON, D.C. (NSI)—Internet and online service usage is taking the way they do. The number of active users is growing, and watching television, and even more watching, according to a new report from U.S.-based research firm The Strategy Group.

The Strategy Group and "Internet" 44 percent of Internet users indicated in its survey that their use of the Internet has reduced the amount of time they spend watching television or using the VCR.

What's more, more than two-thirds of the Internet users surveyed said they spend less time on all Internet time and social activities than before they used the Internet. Forty-eight percent of Net surfers spend less time on reading, 24 percent devote less time with family or friends, and 23 percent spend less time on exercise.

The Strategy Group survey also indicated that a certain extent the usage of the

Net is affecting a high-end product, such as coffee makers they should be sleeping. 29 percent said they accessed the Internet instead of going to bed.

In addition, more than one-third of users surveyed said the Internet was "extremely important" to their daily lives. And almost as many people said the Net was "moderately important" to their day-to-day activities.

"Since the Internet will be as important to users as television, books, newspapers and magazines," says Mark Pugh, Strategy Group research consultant.

Results for the survey were based on a "nationally representative" of the United States survey sample of more than 1,000 Internet users, including over 300 Internet users. Strategy Group added contact Strategy Group.

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GrimJack's top 10 gaming sites



GrimJack is a 3D first-person shooter game that's been a hit in the computer industry, and it's now a play-
ing field. Capture the flag on the internet.
No top 10 gaming Web sites are

1. **Blue & News** - Probably the best gaming news source. Blue & News has a lot of examples of most active games. This site is updated several times a day at all hours--it's a news you'll find in here.
<http://www.blueandnews.com>



2. **Stomped** - A hosting site, Stomped is a collection of the best and worst of the most popular game currently released or in development. Stomped is also the best of my favorite game books, which means it's a much more up-to-date than the one online on Stomped.
<http://www.stomped.com>

3. **Planet Quake** - Another hosting site, this one is better. It's a collection of the best and worst of the most popular game currently released or in development. Planet Quake is also the best of my favorite game books, which means it's a much more up-to-date than the one online on Planet Quake.
<http://www.planetquake.com>

4. **Planet Unreal** - Probably the most comprehensive Unreal news site and it's not just there's a link to a few here. Again, the best news something to be found, but the content makes it worth while.
<http://www.planetunreal.com>

5. **Gaming Insider** - If you want to see the other side of the gaming community, this is the site. It's a collection of the best and worst of the most popular game currently released or in development. Gaming Insider is also the best of my favorite game books, which means it's a much more up-to-date than the one online on Gaming Insider.
<http://www.gaminginsider.com>

6. **Online Gaming Service** - A commercial game service that's not in the top 10, but it's a good site. It's a collection of the best and worst of the most popular game currently released or in development. Online Gaming Service is also the best of my favorite game books, which means it's a much more up-to-date than the one online on Online Gaming Service.
<http://www.ogsonline.com>

7. **Captured.com** - How to modify games based on any favorite form of Quake, and "Capture the Flag." This site covers many different versions of the game and keeps you up-to-date on the latest developments.
<http://www.captured.com>

8. **Voodoo Extreme** - This is a good site if you're looking for information on 3D hardware or general industry news.
<http://www.voodoextreme.com>

Continued on page 104

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Weaving your own Web site: Part XXXV

By Keith Schooniff-Roberts

In last issue, we discussed building a basic Web "tool chest"—a collection of software tools to help you build and maintain your Web site. Despite claims to the contrary, there is still no single Web-building tool that will do everything. You have to pick and choose tools that do a particular aspect of Web weaving very well, and use them on your Web pages as needed.

In this article we will look at some newer tools (mostly shareware) to add to your tool chest. Don't just take my word for it, though—

Building a tool chest: Part II

test them out and if you find something that helps for your needs, grab it.

Web graphic tools

Your tool chest should have several Web graphics tools. You can get high-end commercial products that do everything, or shareware tools

that do particular graphical elements well.

Generally speaking, more expensive tools offer more functions and are more reliable. Luckily for Web authors who don't want to invest a lot of money in graphic design, both Free Step Pro and Ultra can be downloaded from the Internet. They are both shareware programs that if you find you use them regularly it is important that you register the software. For the Free author who has some cash to spend, Adobe Photoshop for Macintosh or PC also forms the backbone package of choice for most serious, professional designers.

The following is a list of popular Web graphic tools and where they can be obtained on the Web.

Free Step Pro by Icon

Free Step Pro fits in a league among Web authors for several reasons. It is shareware, supports over 80 image formats (better image-formating tools and is easy to use. Clusters are if you have tried out several HTML development (language) editors, you may have already met across this program. Free Step Pro is available from just on the Web at <http://www.icon.com>

Ultra Pro by Mindful Research

Ultra Pro is another popular shareware graphics tool. Though arguably not as powerful as Free Step Pro, Ultra Pro is useful for creating graphics and making simple adjustments such as adding transparency, rotating, and zooming. Ultra Pro is available from Mindful Research at <http://www.ultrapro.com>

Photomontage GSP Animator by Icon Systems

GSP Animator is a great utility for creating animated GIF images. The tool is easy to learn and easy to use and allows authors to create GIF animated text consisting any number of frames and speed (i.e., GSP Animator is available in a 32-day trial version as well as in the commercial version). The latest product information about GSP Animator can be found at the Mindful Research website Photomontage Web Utilities at <http://www.icon.com/photomontage-utilities.htm>

Drawings by Drawings

Need to create charts and graphs maps (with graphics with "hot spots" that link to other pages on your Web site)? Look no further. Drawings simplifies the process of mapping coordinates to the online resource location (URL, also known as Web address). This type of utility is getting more and more common in integrated HTML editors. Drawings and HotMails are examples. But if you find a single-purpose tool only use occasionally it is the one to get. You can download a free trial version of the software from Drawings at <http://www.mindful.com>

Adobe Photoshop

Adobe Photoshop is the Cadillac of image tools for the Web. Its graphic tools are not restricted to Web use. Though electronic publishers and graphic artists all own the world have known this program for years, and the latest version of Photoshop contains many enhancements specifically for Web design. It allows you to create graphics that have a "Web safe" palette to optimize images using an adaptive palette to reduce the number of colors used (therefore the file size of the image). It supports creating to real-time images, is very flexible, as you can try out different effects. Unfortunately, there is no shareware version of Photoshop; if you are interested in Photoshop check out the latest product information from Adobe at <http://www.adobe.com/products/ps.htm>

Search and replace tools

Every Web author runs into the problem of having to change a single term—a toolbar or graphic—on every page of a Web site. Finding through every page with a Web editor to make the change is very time consuming. Luckily, there is a category of tools that make this task less painful. Many expensive Web site management programs have other search-and-replace utilities but to purchase more can be overkill. Here is one alternative.

Search and Replace by Pundit Software

If you want to search and replace in one step, check out Search and Replace by Pundit Software at <http://www.pundit.com>

Continued on page 59

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Visioneer offers low-cost doc management

By David Twohassan

When I first got a scanner, people asked me what I did with it. "Well," I'd begin confidently. "I can scan photographs for publishing and Web use, and I can use it for document management."

programs included in Scanmaster II. The three that I think are key for document management are ScanMaster, PhotoMaster and ProCDR32. Scan Master allows you to directly enter text on a scanned form, which I found useful for the various found items that need to

be filed, not and saved back. PhotoMaster re-does just what it claims: it provides on-line live means of adjusting brightness, contrast, sharpness and more. While none of the options are quite useful (such as adding the effect of an outdoor flash to an image), the

menu can be a show; for instance, you cannot select a degree of lightening for an image; it must be adjusted by viewing the results of which implies three commands.

Continued on page 143

PaperPort ScannerSuite

From: Visioneer
Tel: 800-628-6300 or 800-787-7867
http://www.visioneer.com
Email: info@visioneer.com
System requirements: IBM or compatible PC
Windows 3.11 or 3.11
Estimated street price: \$119

"Document management? How do you do that?" they would ask.

"Well, I can scan scanned documents with my Visioneer scanner, PC, etc." At this point, I'd start blathering. "Yes, but the Scanmaster II/Capture file the document!" Then I'd quit for the day.

The suite of the master is, keeping track of text and graphics documents stored with only Windows 3.11 Explorer and a handful of utilities is hard work. It is why Visioneer's PaperPort ScannerSuite is so exciting. Like a car salesman in a cheap suit, his colorful box promises to take your computer into a document-management, presentation, scanning, even software suite (PaperPort Deluxe, ProCDR32, High Resolution AGS, Publisher, NewsTypes, PhotoMaster, and PhotoScan Express) for one low price. Automatically the Scanmaster does the job and does it well, with less a few cents.

Most people associate PaperPort with the slender sheet scanner that got Visioneer on the map. The Scanmaster is software only; it will work with PaperPort hardware, of course, but also with any TWAIN-compliant scanner, according to Visioneer.

The backbone of the suite is PaperPort Deluxe, currently at version 3.2. When you start PaperPort, you're greeted with a grey desktop with a spinners view and two tool bars. On the left is an Explorer-like window with various folders with names like Article and Item Files. On the right is the PaperPort desktop with thousands of the scanned documents in the current folder. As you might expect, these documents can be moved, copied, deleted or converted to various formats.

But there's just document organization, not management. When PaperPort shows in its features list indexing, sorting, and categorizing documents. Multiple page documents with individually scanned pages can be compiled by "stacking" them; each document can be marked up and annotated without permanently affecting the original image; keywords and comments can be added to each document. My favorite feature for text documents by far is SmartSearch, which does a quick (it's typical character recognition) operation and shows the first hit in a document that can be searched later.

A toolbar on the bottom provides drag-and-drop access to your applications. A nice touch is that the PaperPort can supply the application with a copy of the original image. If you're so inclined, you can alter an image in Photoshop without saving the original.

Among the applications are, of course, the

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Internet Services You Can Depend On

Domain name disputes

Continued from page 84

Canadian-based Internet has registered more than 12,000 Internet domain names with the word aimed at locating the domain names at email addresses. The domain names were common proper last names such as Avery and Deane. 480 used the ".net" top-level domain rather than the more popular ".com" domain. Avery Domain used, challenging the defendant's registration of the Avery.net and Deane.net domains, alleging trade mark infringement and dilution. The court issued judgment for Avery Domain on the basis that the defendant's registration of the domain names prevented Avery Domain from using its famous trademarks as an Internet domain name thereby wrongful

ly utilized its marks ability to identify their themselves goods and services in violation of the U.S. Federal Trademark Dilution Act. The court held that "the Internet registration system simply does not authorize cybersquatting" which the court assessed would prevent Internet domain names from being used for their highest and best use. The court ordered the defendant to transfer the domain names to the plaintiff.

The April 22, 1998 U.S. District Court for the Southern District of California decision in *Playboy Enterprises Inc. v. Dowd Media* involved a claim that former Playboy Playmate Wendy Wilder had unlawfully used a number of Playboy's well-known trademarks in her privately-written e-mails and postings in her adult-oriented Web pages. Playboy argued this constituted

unfair competition and trademark infringement and dilution. The court affirmed Playboy's preliminary injunction application. The court held that Wilder used the Playboy trademarks in good faith to disguise and identify herself and the contents of her Web site and there was no likelihood of confusion or risk of trademark dilution. The court reasoned that Playboy had not established a strong likelihood of success on the merits and the injunction should not be granted.

Protecting valuable domain names

The following are some basic rules that ought to be followed to protect valuable domain names and guard against the usual lawsuit cost of trademark and names as domain names.

Viewing your own web site

Continued from page 88

Simply view this sample on potential validity will gradually change code on your Web site. It can add lines of HTML code quickly to all of your Web pages. It is a shareware utility and can be downloaded from <http://www.fpc.ca/htmlvalidator/htmlval>.

HTML validators

Check structural faults to create your Web sites. It gives hints and making changes. In the main window, you can design your code using a template. It is a good idea to use one of several Web sites to view, test, and then check your code. It is a good idea to use one of several Web sites to view, test, and then check your code. It is a good idea to use one of several Web sites to view, test, and then check your code.

Desktop HTML by Imageware Inc.

Desktop HTML is a very useful Web-based tool for creating your Web pages to check for spelling mistakes, missing images and broken hyperlinks. Desktop Indemnity on Desktop HTML is available at the Imageware Web site at <http://www.Imageware.com/DesktopHTML>.

WebLint

WebLint is a Perl script that checks your Web pages for syntax across web site. Information about WebLint can be found at <http://www.cse.cmu.edu/~web-lint/>.

Web Site Garage

This online validator can't get any simpler...

- (1) make registration and renewal payments to a domain registrar;
- (2) register domain names as trademarks;
- (3) properly use domain names as trademarks in association with your services;
- (4) contact the Internet C.A. to register your domain name as a trademark;
- (5) make timely steps to stop all infringing conduct through negotiation, administrative dispute resolution, or litigation.

Bradley J. Freeman is a trial lawyer with the Vancouver law firm Laidlaw Davies. His professional areas of practice include intellectual property law and trademark litigation. He can be reached by email at brad@laidlawdavies.com. This article is a general nature and does not represent or constitute legal advice.

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ICSA forms Malicious Code Consortium

1000 J. G. B. Thompson

CARLEIGH, EN (PSE)—The International Computer Security Association (ICSA) has formed a Malicious Mobile Code Consortium (MMCC), set to create malicious malware-aware, but to counter them.

Measures include state or city anti-education trust programs that come in from the federal and counties matched against a trust program.

The defensor covers any program that can take independent action to cause damage on the host system. Examples are ActiveX controls, Java applets, scripts, HTML (Hypertext Markup Language) sites and

however "helper programs." Any of them can be misused to damage data or storage or even carry out denial-of-service attacks against World Wide Web sites or Internet service providers (ISPs) or against standard services on a user's computer.

During a recent teleconference, management of the consortium, and MMC has already got to set the consortium's direction and define its goals for the next three months.

One primary goal of iM4C is to inform users about the formats and the tools now available to create them. Over the next three months, said Hager, iM4C will develop a Web page at the iM4C primary site as an information resource.

Next, M&C will produce a white paper describing the nature and extent of the mobile malware issue faced. Also, the group will lead a survey designed to quantify concerns from the current users of threat and counter measures.

Handy and Wapnet, the group will prepare criteria for product testing and certification to provide baseline standards for the industry and give users a way to pick and choose among competing products.

Harper emphasized the consortium does not seek to eliminate anti-trustable and from Internet use. "They have played a very key role in making the Internet into a useful electronic environment," he commented. ■

encourage the use of this technology in an intelligent and safe manner.

They include Advanced Computer Research Ltd., Computer Associates Cybermedia Technology Dr. Solomon's Software, Vast Technologies, Vantage Corp., Internet Security Systems, Quarterdeck Corp., Security Systems Corp. and Trend Micro, with more firms expected to join.

KISA is a commercial company that not only sells different types of computer security software and hardware. □

High-tech workers likely to switch careers

INDIA, Virginia (PR)—Call it early-middle-age crisis or just plain burn-out, but almost half of all college-educated workers in their early 30s would choose a different career if they could do it all over again, according to a recent survey by Career Moves, Inc.

But while most of the most talented engineers they could recruit on science or technology the second time around, the grant appears poorer on the liberal arts side of the issue by information technology students as well.

"It seems that non-technical people want to know more about technology, while technology people are finding there's more to life than bits and bytes," George Masco, Delivery president, Alan C. Martin and "The results are a healthy sign that people are looking to balance their lives and E-B is the sign."

Orange Mass. University conducted the study with the Potential Knowledge Way a Northern Virginia organization focusing on the information technology industry.

While 17 percent of the 400 graduates interviewed by Market Research Institute Inc. for the study have taken additional college-level courses since graduation, nearly 60 percent have career information technology websites more like than other students by a 21 percent to 22 percent margin, to take courses purely for the personal rather than professional reasons.

The survey also found that information technology workers are almost twice as likely to retell rumors as the average employees with one in three saying he or she expects to make a career change in the future. *Continued*

The study found that the majority of college graduates have sustained careers in at least one and almost one in five expects to switch to the future.

Almost all percent of the respondents said that if they had to do it all over again, they would have imposed on something else, with the most popular choice, nanotechnology, being the liberal arts with 45 percent. Some 37 percent said they would switch to account, technology or computer science, while 17 percent also said they would switch to a business-related major.

But the same degree of seriousness also showed up in the high-tech gamers, with 30 percent saying they would choose a stillness impact if they could. More than 30 percent said they would opt for the "milder" category usually meaning liberal arts, while 34 percent said they would search for education. Only seven percent said they would search for business or government careers.

"The results suggest that employees are more positive than in the past," Morton said, "and that companies, especially in the critically short-staffed high-tech industries may want to take a hard look at their retention efforts."

But neither what the career choice is. Here, however, the vast majority are confident they can handle the result of technology. Only seven percent feared the pace of change would pass them by, while 40 percent described themselves as "amiable" with the technology both on the job and in their homes. Another third said they are getting by, but some with the technology, but not as a first choice.

concerned with what may be coming down the road.

The study also found that 69 percent of the respondents said they would be more likely to stay with an employer that could hire all

IBM to replicate damaged Pieta

FLORENCE, Italy (ENR)—IBM researchers with genetic computing group have announced a possible Michelangelo's damaged second nose is defined by means that have never. Using IBM modeling techniques, the team—led by Jack Waserman, a prominent Renaissance art historian—has modeled the nose and perhaps even the face of what the great artist sculpted his master.

An IBM spokesperson told *Newsweek* from last year that the extensive work it did, with over two billion bits of data and Windows servers, the Veritas, most comes in the by phone support, has been applied software specifically designed for the product. It allows capture the entire surface data, and then to be processed, then off the site, and off.

Gabriel Nudelman, head of the research grant, has presented the archaeological challenges in a (3D) movie that could be used to "visualize, from different points of view,"

Bill and the VMware team is taking shape: The portions of the shape phone we saw signed 3D representations of what the pieces of developing new hardware and software challenges. It's working the three

"The results show that the need for lifelong learning is here," Morton said. "Employers that ignore their employees' desire for ongoing education do so at their own peril." □



Global Telecom, head of the research group, said the project held not only artistic interest, but presented the technological challenge of collecting data, then assembling that data into a 3D movie that could be used to "render very accurate images under different lighting conditions, from different points of view."

IBM will use the Virtual Image to take about 700 separate digital shape photos of the statue. The positions of the shape photos will be critical when assembled into a "single, accurate digital 3D representation" of what the computer has stored. An IBM source said the process of developing new hardware and software to manage 10 huge amounts of data was also a challenge. IBM's work on the VIM will be considered in a book.

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The pattern emerges...



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A superficial look at Microsoft Web tools

By Keith Schengill Roberts

This book from Microsoft Press covers basics on developing Web sites using Microsoft's many software tools designed for this purpose. But first, Mary Maggard has had a lot of experience with such tools as a regular contributor to the popular Microsoft Site Builder Network Magazine on the Web. But while the magazine contains some generally useful, practical information for Web developers, this book looks the depth found in the magazine.

One good example of this is the book's coverage of a feature in Internet Explorer that lets you specify files that can be automatically downloaded (instead of going into the subject in detail, the book simply refers you to a Web page at the Microsoft site).

The book contains some interesting inter-

views with Web developers who are using Microsoft tools, and a detailed overview of such things as developing content and dealing with Web servers. But while there's plenty of ground covered, the lack of depth makes the book in some of it being a low "survival guide."

It is a good introduction to such topics as

Active Server Pages (ASP) and Script, and the types of software tools available from Microsoft to help you build Web pages—but don't expect much more than that. On the whole, a cheap, printing read—it's a book that should have been much better. Microsoft Web tools developers better than this depth level off. C



**Survival Guide
to Web Site Development**
Author: Mary Maggard
Publisher: Microsoft Press
(first published by O'Reilly for the 1992 edition)
ISBN: 1-55558-951-1
October 1994, 194 pages, 199p
Price: \$29.95

Rating:
Information quality: **
Readability: ****
Relevant for beginner:
Overall Rating: **1/2

The book is refreshingly devoted to the concept of creating a Web site using Microsoft tools. This is certainly good considering the number of such tools available, including FrontPage and Visual InterDev. The book does contain the book looks at Perl for developers with only Internet Explorer Explorer in mind. It does talk about working with Netscape as well (somewhat vaguely), but it looks its conversation more on features found only in Internet Explorer, such as Active Desktop and Channels.

On the whole, the book provides a good overview of the many tools available in the would-be Web market. Unfortunately, it does every time going into only particular layer in depth, and the reader is constantly referred to Web pages for more information.

Let's see, I didn't buy a book just to look up URLs on a subject. I bought a book because I wanted an explanation at point. It is all very well to point me an URL that provides more information on a topic, but in this case the book uses the URL to simply clarify expla-

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Photoshop experts offer Web design tips

By Keith Schwab Roberts

Most books on Photoshop divide one or two chapters on designing graphics for the Web, but for an in-depth guide to using this image-creation software you'd better use this book. To that end, O'Reilly comes to the rescue with *Photoshop for the Web*.

Photoshop for the Web

Author: Keith Roberts

Publisher: O'Reilly & Associates
To: 800-998 9938 My name is Keith
ISBN: 1-56592-959-2
Format: 187 pages, 1998
Price: \$29.95

Rating:

Illustrations: none, ***

Readability: ****

Illustrations: none, ****

Overall Rating: ****

The book is written by Michael J. Meeks, a photographer, writer and Web producer who knows more than a little about Web graphics and the associated many graphic artists behind

such well-known Web sites as the White House, CNN, Discovery Channel and Amazon. Many of the book's many tips and tricks of the trade. This book is not merely a dry manual on how to use Photoshop; it's a detailed and well-written guide with advice from experienced users.

There are plenty of neat tricks in this book for getting the best results using Photoshop for the Web. It includes tips on adaptive pictures, creating usable new Web pages, color and expanding images for clarity and this also includes tips on how to use Photoshop to automate the production of images for the Web, using Photoshop as a Web layout tool and avoiding color shifts when importing vector images. In short, *Photoshop for the Web* has plenty to keep Photoshop users interested.

The steep price is largely due to the num-



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ber of color illustrations (just under 90 illustrations that accompany the text). Unfortunately for the authors, technology never stands still and neither does Photoshop's capabilities. Adobe Studio after the release of this book, meaning Adobe found in Photoshop 5.0 and 4.0 Adobe launched Photoshop 5.0 which comes with new Web-specific features.

Despite this handicap, this book is well written, easy to follow, even for a graphical challenge. Photoshop prior to this myself and with plenty of hands-on examples. *Photoshop for the Web* is really one of the best specialized computer books I've read this year. It is highly recommended for Photoshop users. C

Mobile Pro

Continued from page 93

Comparison:

Previously, the Toshiba Libretto 70CT has a better CPU, a hard drive (currently a 1.5 GB), 6MB active matrix screen with twice as many pixels and, "real" Windows 95 capability of directly running all programs that a desktop computer can run. On the other hand, the NEC MP-750C carries all the main functions of the Libretto, requires little heat (the "Libretto" isn't), and with its "two speed" design it should be less susceptible to impact damage.

While the MP-750C is striking visually with its bold silver finish, it seems the most striking feature is really the value. At less than half the price of a Toshiba Libretto 70CT (although only a few hundred dollars cheaper than the Libretto C130, which is similar to the 70CT but with a 75 MHz Pentium processor and 400 MB hard drive) the question is the mind of a potential user: is whether there is sufficient benefit in having full desktop Windows in a unit intended for less frequent "back to the office" to justify paying more. Many people are going to find the NEC MP-750C comes their needs, and will pocket the change. The MP-750C is a strong competitor in this class. C

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To run Office 98 comfortably, Microsoft recommends a minimum configuration of a 333 MHz Power Macintosh with 32 MB of RAM and at least 70 MB of available hard disk space. However, if you plan on using Word, Excel and PowerPoint concurrently (the 64 MB of RAM is a more realistic requirement).

It is also recommended you enable virtual memory through the memory control panel when running Office 98. With virtual memory turned on, the minimum required RAM allocation is 8 MB for Word & 16 MB for Excel and 32 MB for PowerPoint. Once virtual memory is off and you will have a large hard disk penalty by lowering the RAM requirements to about 12, 16 and 34 MB respectively. When using the attributes RAM settings with smaller disk sizes, it occasionally encountered errors from Word and Excel that they were running low on memory. Be prepared to locate the settings if you plan on working with large documents.

If you want to remove the office product truly from your Mac, Microsoft provides a utility Apple-Install Apple Office 98. If you decide to purchase Office 98, be sure to go to Microsoft's Web site to get the updated version of the utility. In the rare circumstance where a user moves the Office 98 library out of the hd Office 98 folder and into the System folder, the final release of this utility will remove your System folder, thus the trash if you decide to uninstall. Oops.

Office refinements

Installing virtual memory dramatically improves the performance of applications

launch times. On a Power Macintosh G3/100 model the launch times for Word, Excel and PowerPoint take about one second. I have to admit that the immediacy of having software ready to go when you want to get it with immediacy to the user experience.

Migrating from the older version of the software to Office 98 won't be a problem for most users. For the most part, all of the core prompts of the site still maintain the same look. Word has received the biggest overhaul of any of the packages and takes each user in use of contextual versus spelling and grammatical errors are automatically flagged by red and green squiggly notations, which in turn locate pop-up menus with correction suggestions when you hold the Command key down and click with the mouse. These contextual menus also come in handy in Excel and PowerPoint.

Probably one of the biggest advantages for using Mac Windows desktop data is that Office 98 and Office 97 share a common file format. No longer does the Mac user have to use Mailbox or specialty translators to exchange Office files through the network or by disk. Because the file formats are now more compatible (and file formats are now more compatible) the process is completely transparent. This capability is long overdue and will probably be the most compelling reason for most customers consider you to go with this update.

To help provide some creative relief in the course of a workday, Microsoft has provided an automated help agent named Sam, this probably qualifies as "the world's most advanced Tarragator" and is characterized as

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Organizing outlines

By Helen Bradley

This month we look at how to quickly and easily organize and navigate your documents using the outline options at your word processor. If you're using Word 7.0 the great news is that you don't have to do

any hard work to create an outline—the program does it all for you! If you're using WordPerfect 7.1 or WordPerfect 8.0 you'll need to direct the program a little bit faster, but the benefits are worth the effort.

An outline is a top-down view of the structure of a document from the highest-level

headings down to the lowest-level headings and the text that follows them. When you take an "outline view" of a document you can collapse it to show only headings to a certain level making it easier to see how your document is structured. Because you can expand and collapse each portion of your docu-

ment, the outline view is useful when creating long and complex documents by allowing you to selectively "hide" all the text except the portion you are working on.

Another reason to use outlines

If you don't regularly use styles in your documents, then the ability to have Word automatically create an outline for you is another good reason for changing your habits and starting to use them. (Click on TCP 10/98 at the bottom left for the tips on using styles and for long help on styles in your word.)

Outlines on a plotter

If you do use Word's built-in heading styles (Heading 1, Heading 2, etc.) then Word will already have an outline for you. Of course you can see this by selecting View Outline and your editing window will change to display your document with a number of symbols down the left of the page opposite each paragraph.

These symbols indicate the level of each paragraph in your document. You can have up to seven levels in a document corresponding to Word's class heading levels (Heading 1, Heading 2, but you'll find that in most cases, three to four levels are sufficient).

Making sense of the symbols

The plus (+) symbol indicates that a paragraph has text following it at a lower level. This includes text formatted with a style that Word doesn't recognize as a specific outline level. The minus (-) symbol indicates that the paragraph has no text following it at a lower level. A paragraph with a small square beside it is text at the "body text" level of the document, which is generally text consistent with the format style.

When you are in outline view you'll notice that some of your formatting, such as justifying spacing and indenting, will disappear. Word applies temporary indenting to show you the different levels in your document more clearly but your own formatting is still there.

The Outline toolbar

The Outline toolbar appears when you are in Outline view and contains buttons to display your document in different ways. The buttons numbered 1 through 7 allow you to expand or collapse your document so you view only some of the headings. If you select 1, you'll see only the first-level headings. If you select 3, you'll see the top three levels. If you can display all the document by selecting the Show All Headings button at the bottom of the buttons down to level 9 by clicking the Show All Headings button twice.

If you are viewing only some of the headings in your document you can expand a section to see the headings and text below it by selecting the heading and then the Expand button. Every subsequent press of the Expand button will reveal an additional level of heading until all the headings and body text are visible. You can access this and progressively collapse the document using the Collapse button.

Using the collapse and expand features makes it easy to move around a long document and to get a feel for its organization without having the actual text get in the way. If you find a paragraph at the wrong level of the document, you can change it using the Promote and Demote buttons or both if you

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body text by selecting the Outline to View button.

The Screen Forefront button allows you to hide (and display) buttons in outline view if they prove a distraction on the screen.

What you can do in outline view

Out text appears in outline view, that isn't available elsewhere in Word are buttons to move paragraphs up and down, select the text, append the paragraph to move and then select the Move Up or Move Down buttons on the Outline toolbar to move the paragraph. Move that any paragraph that follows the paragraph that are at a lower level will move with it.

Adding a style to a level

If you use your own style rather than Word's heading style, you can easily associate your style with an outline level so it will be treated the way all the text in styles. To do this, place the insertion point in a paragraph that is formatted in the style you want to link to an outline level and select Format, Styles, Select More, Select, Paragraphs and select the format you desire, tab, to the Outline level, but how enter the level that you want to associate with this style and select OK, OK and Close.

Shortcut keys

Most of Word's outline features are accessible by shortcut keys. Here are a few useful ones.

Ctrl + Shift + B	Apply Normal Style and demote paragraph to body text level
Ctrl + Alt + 1	Apply heading 1 style
Ctrl + Alt + 2	Apply heading 2 style
Ctrl + Alt + 3	Apply heading 3 style
Alt + Shift + left arrow	Apply the paragraph and style a higher heading
Alt + Shift + right arrow	Demote the paragraph and apply a lower heading style
Alt + Shift + plus (+)	Expand the text below a heading
Alt + Shift + minus (-)	Collapse the text below a heading
Alt + Shift + up arrow	Move the selected paragraph up
Alt + Shift + down arrow	Move the selected paragraph down

Using the mouse

In addition to the keyboard, and the toolbar buttons you can position or describe any heading using the mouse. Hold the mouse pointer over the outline symbol next to the heading and drag it to the right to describe it and to the left to promote it. (You'll see a guideline appear to show the level you are changing the paragraph to. You can also drag a paragraph's outline symbol up or down to move it to the level you'll see a horizontal guideline showing where it will be moved to.

Working in outline view

If you work in outline view rather than Normal, or Full view, you'll find that it behaves a little differently. Where you type a heading is one style and press Enter the next line will appear in the same style instead of reverting to Normal, which it would in the other views. This is because outline view is designed to allow you to create a document from the top down, typing major headings first and then creating the subheadings under each heading and so on.

You should use outline view to create a

Continued on page 104



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Stepping stone

Continued from page 89

The most interesting option, however, by far, is to let you preview any possible adjustment settings at a time. Graphics would still prefer Adobe Photoshop's more precise image-editing controls, but this is a pretty good second place. One glaring problem, though: PhotoLab doesn't read compressed TIFFs.

PhotoCRUISE is a fairly easy to use. Like other OCR programs, you can maximize the preview area by simply pushing the buttons to follow through on all your settings automatically. A third option, the OCR Wizard, guides you through the process.

PhotoCRUISE is one of the few products out there that is cheap, fast and good. Volunteers claim it is the fastest and most accurate OCR package around, while I can't verify that. I can say it is pretty quick and for the most part, very accurate. Once originals were scanned with more than 99 percent accuracy and even a failed scan usually yielded about 25 percent of the original text in very high, but readable, readability conditions.

Unfortunately, PhotoCRUISE's great performance is hampered by problems with some of its other features. Clicking on a file often crashed the program when the document was loaded in from PageFind Deluxe (as opposed to running PhotoCRUISE on its own). Choosing to preserve the original document's appearance (which, incidentally, I tried in this option and required the results in Microsoft Word, everything looked fine). Close inspection revealed PhotoCRUISE used a strange mix of features and contained no way to fix this effect.

A minor gripe is that PhotoCRUISE only deals with monochrome scans. This is probably understandable for its use, but the program does offer the option of recognizing text and graphics simultaneously. Suppose I want to keep the graphics in color?

While these problems are annoying, they can generally be worked around with a mix of use and if Volunteers from them (they are going to fix them, right?) The overall result is that ScannerShare's own programs follow through on their promise, providing effective document-management tools at a reasonable price. ☐

Info: Volunteer (jordan@cpa.ca) would like Volunteers and other companies to stop using those that are 75 percent empty space.

Simplifying the search for

Japanese pop music • PD—Finding

Web sites devoted to Japanese pop music, or "J-pop", just got, thanks to a new Windows application that allows users to search for sites directly from the URL field of their browser. Just type in "Jpop speed" into the URL field to query the Jpop search engine for sites devoted to pop group "Speed", for example. You can also specify other search groups, like "J-pop" for J-pop/rock, thus removing the need to visit the home page directly. <http://jpop.net> is a

News

Continued from page 78

you are a casual for this event, it plays the sound while opening the program, and if it is a Windows application, it disables the program's ability to detect your sound hardware and may cause the program to malfunction. You can safely set a sound for Close Program.

Once you have assembled the elements of your desktop theme, you can download a theme file that installs Windows on how to use them. Check out the Mission and Tools sections for first-time for a selection of download links. These custom software, find the instructions included with each program, as they all vary slightly in features and location.

Creating and distributing startup and shutdown screens to go with your new theme is as easy as editing images. Open your image editor and start it with a 640x480 file. Then you have created your masterpiece, convert it to 256 colors and save it to 320x480 file. Don't check the Monitor Aspect Ratio check box. Save the image as logo in the Jpop file. This requires that you put the double quotes around the name when you save it. If you are making a web screen, the filename should be jpop.htm. If you are making the shutdown screen, the filename should be logo.htm. Take a moment to back up your current logo screen in a separate directory. The startup logo is in the root directory of the C: drive of your computer while the shutdown and the logo.htm screens are in the C:\Windows directory. When you have backed them up, put the new screens in the appropriate directory and reboot your computer to see your new theme. ☐

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